



Project 3

Introducing Culture to Children through **Storytelling**

Under guidance of Prof Ravi Poovaiah

Project by Astha Kabra
126330006, Interaction Design
Industrial Design Centre, IIT Bombay

CULTURE

Culture... is that complex whole which includes knowledge, beliefs, arts, morals, law, customs, and any other capabilities and habits acquired by as a member of society.”

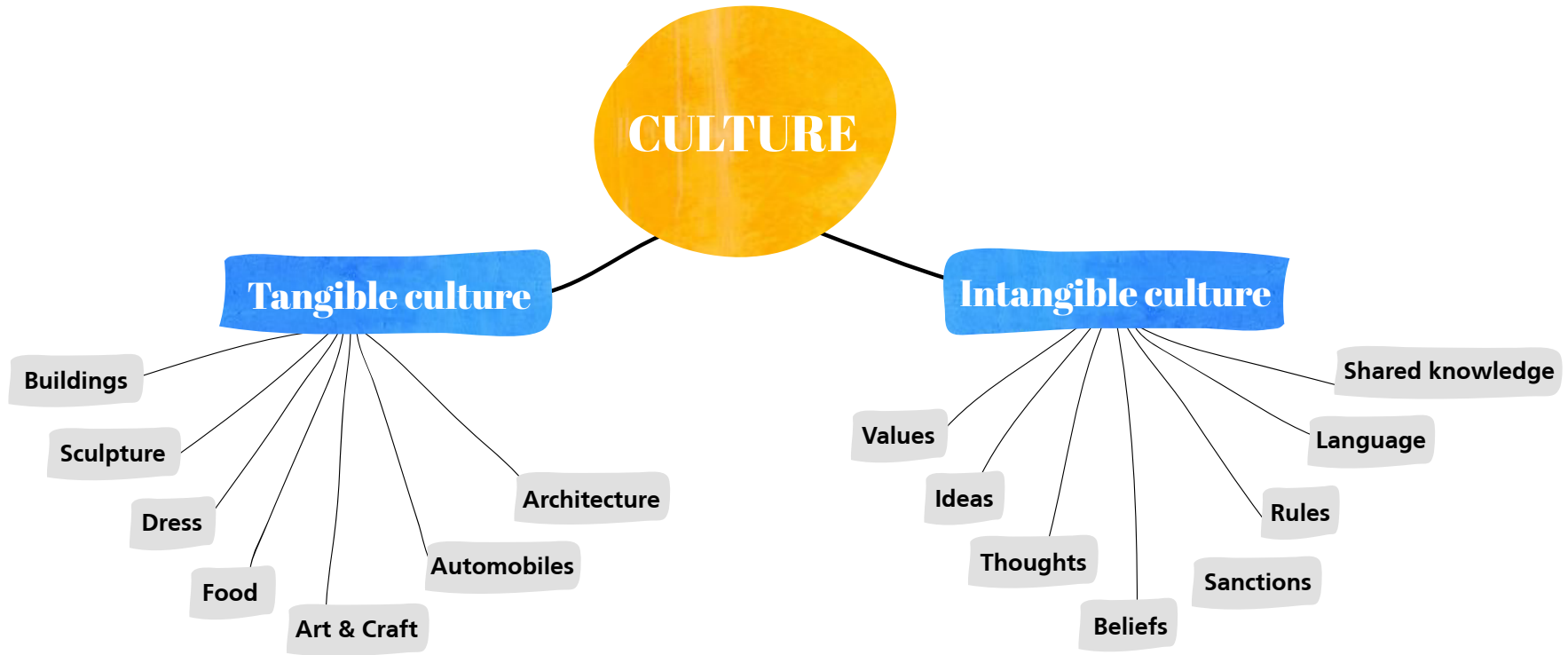
Sir Edward B. Tylor's

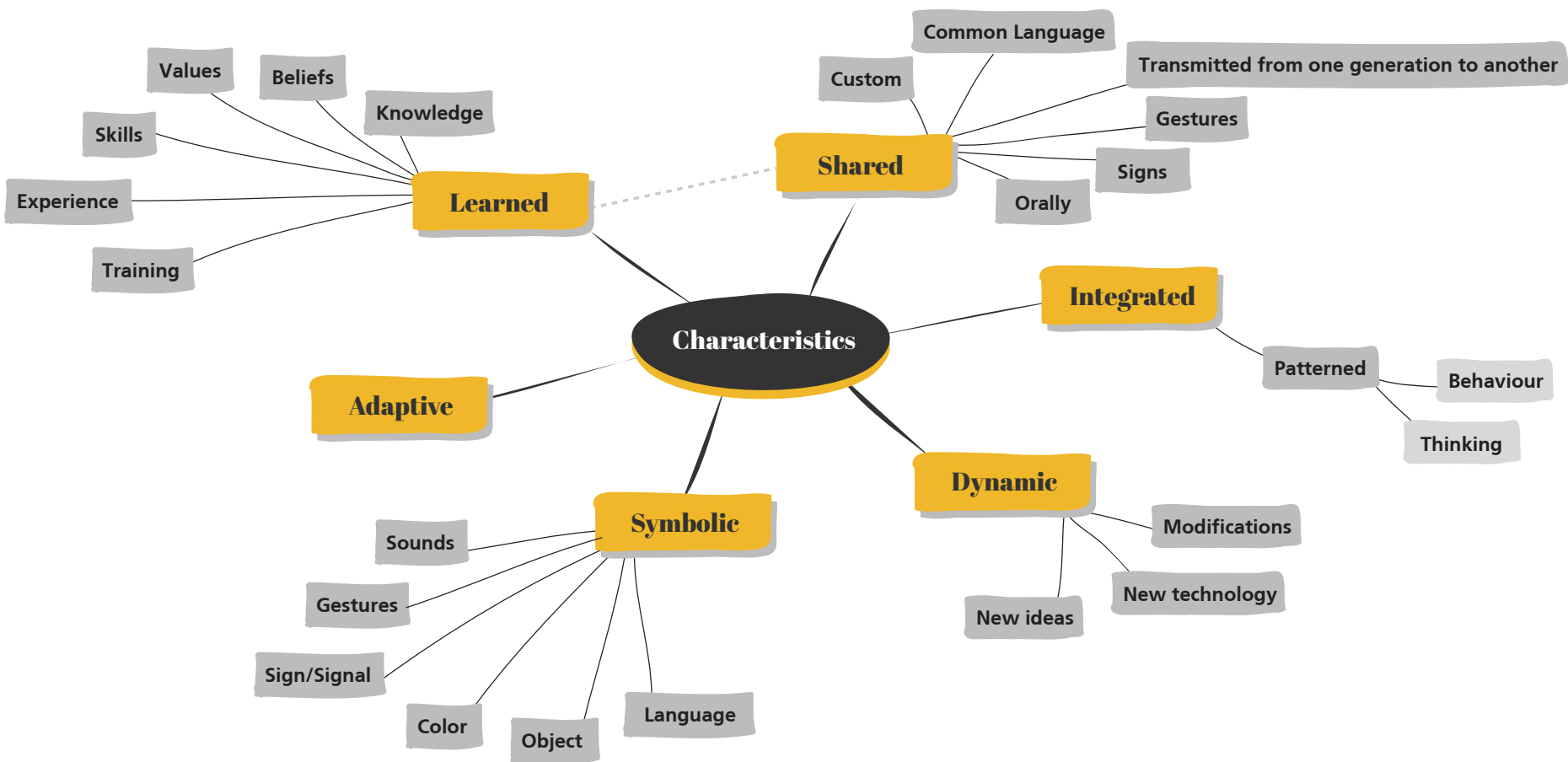
Cultural Anthropologist

CONCEPT OF CULTURE

Culture is a way of life.

It's representation of the way in **which we think** (value) and **do things** (behavior) and the material products they produce.





RAJASTHAN



माइक्रोसॉफ्ट

युनाइटेड नेशंस का एक युवा समारोह है जिसमें बच्चों और युवाओं के बीच अनुभवों का आदान-प्रदान होता है, इससे अलग-अलग देशों के बच्चों और युवाओं के बीच के संबंधों को मजबूत करने में मदद मिलती है।

सोमवार, 26 जुलाई, 2010 को

धुम्रपान निषेध

दिल्ली की मुख्यमंत्री शीला दीक्षित ने अब खेलों से जुड़े निर्माण कार्य में लगे

बेल्जियम

सूचना और प्रसारण

प्रधानमंत्री के सचिवों के अनुसार, प्रधानमंत्री शीला दीक्षित ने बीजेपी के राष्ट्रीय अध्यक्ष लालू प्रसाद के साथ एक बैठक में भाग लिया। इस बैठक में प्रधानमंत्री ने लालू प्रसाद के साथ एक बैठक में भाग लिया।

जट रिस्की, आफ्टर विस्की





BELIEFS

TRADITION

LANGUAGE

STORIES

RELIGION

culture

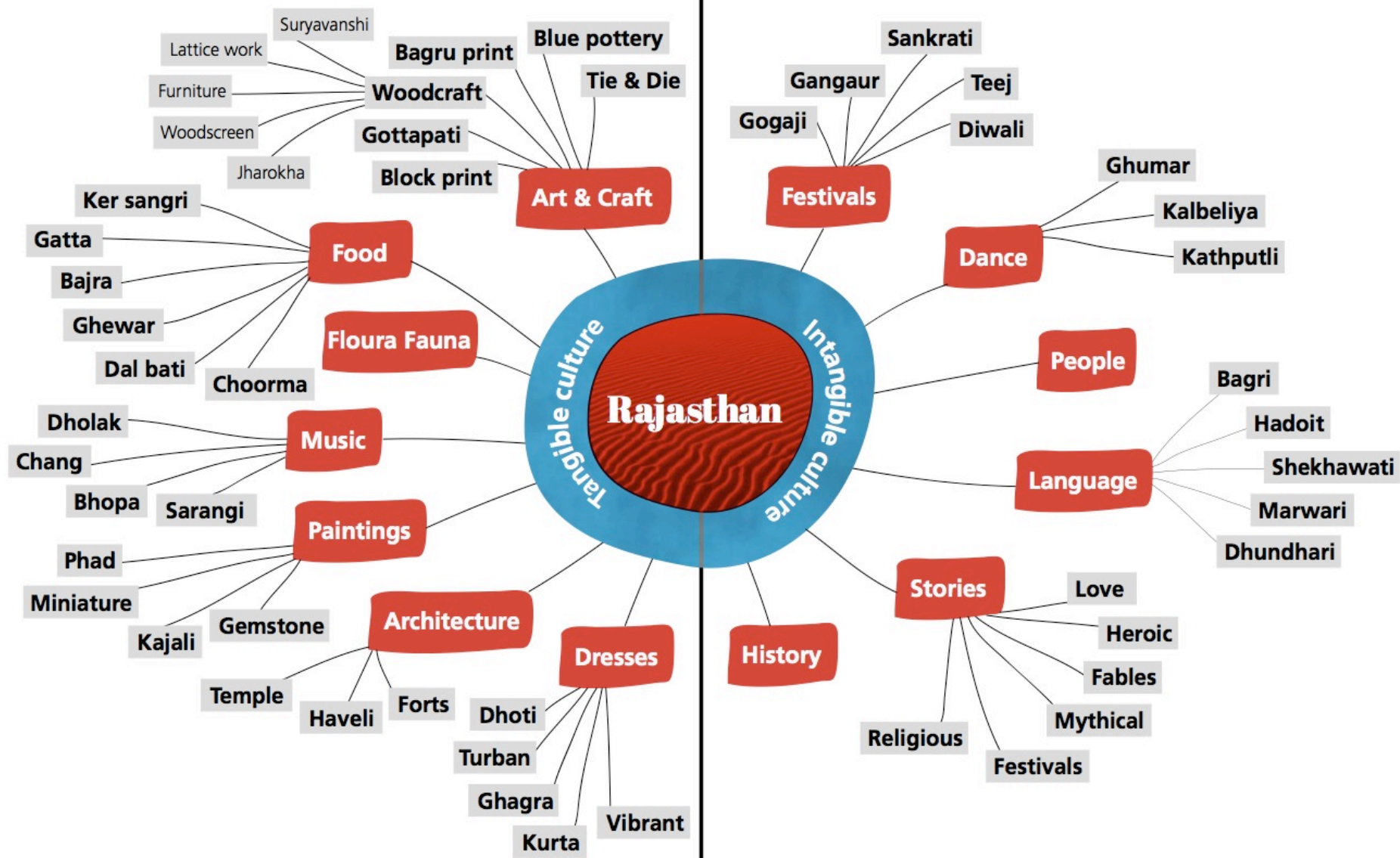
MUSIC

CLOTHES

IDENTITY

FOOD

HERITAGE



Importance

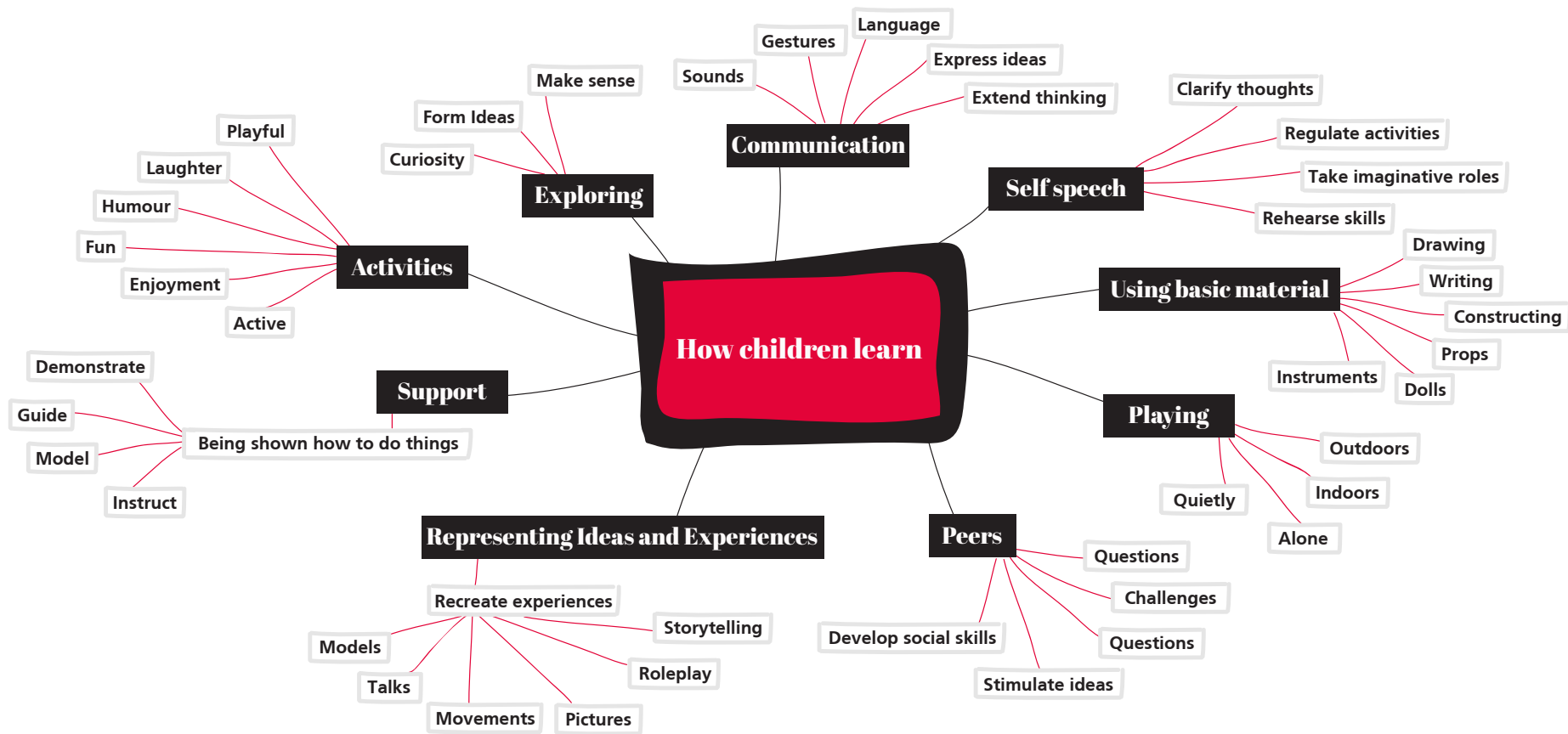
Many families along with their children migrate from their home towns to urban cities, while trying to fit in the urban lifestyle they ignore their own culture and native language.

Children who are not completely aware about their own culture can face problems like identity loss or alienation from their grandparents or other family members.

Project Brief

The aim is to promote, foster and propagate the cultural heritage and value system of Rajasthan amongst children.

CHILDREN



LEARNING STYLES



VISUAL
(spatial)



AURAL
(auditory/musical)



SOCIAL
(interpersonal)



SOLITARY
(intrapersonal)



PHYSICAL
(kinesthetic)



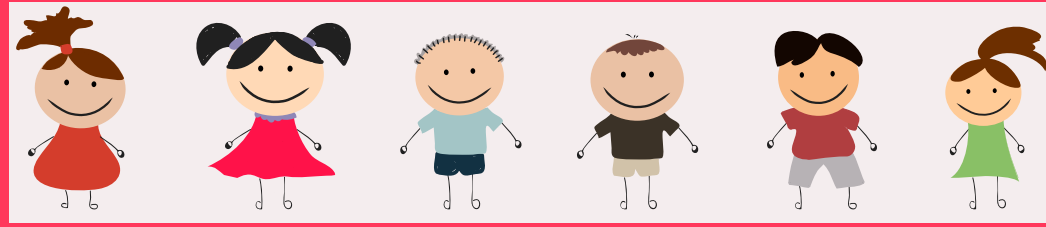
LOGICAL
(mathematical)



VERBAL
(linguistic)

AGE GROUP

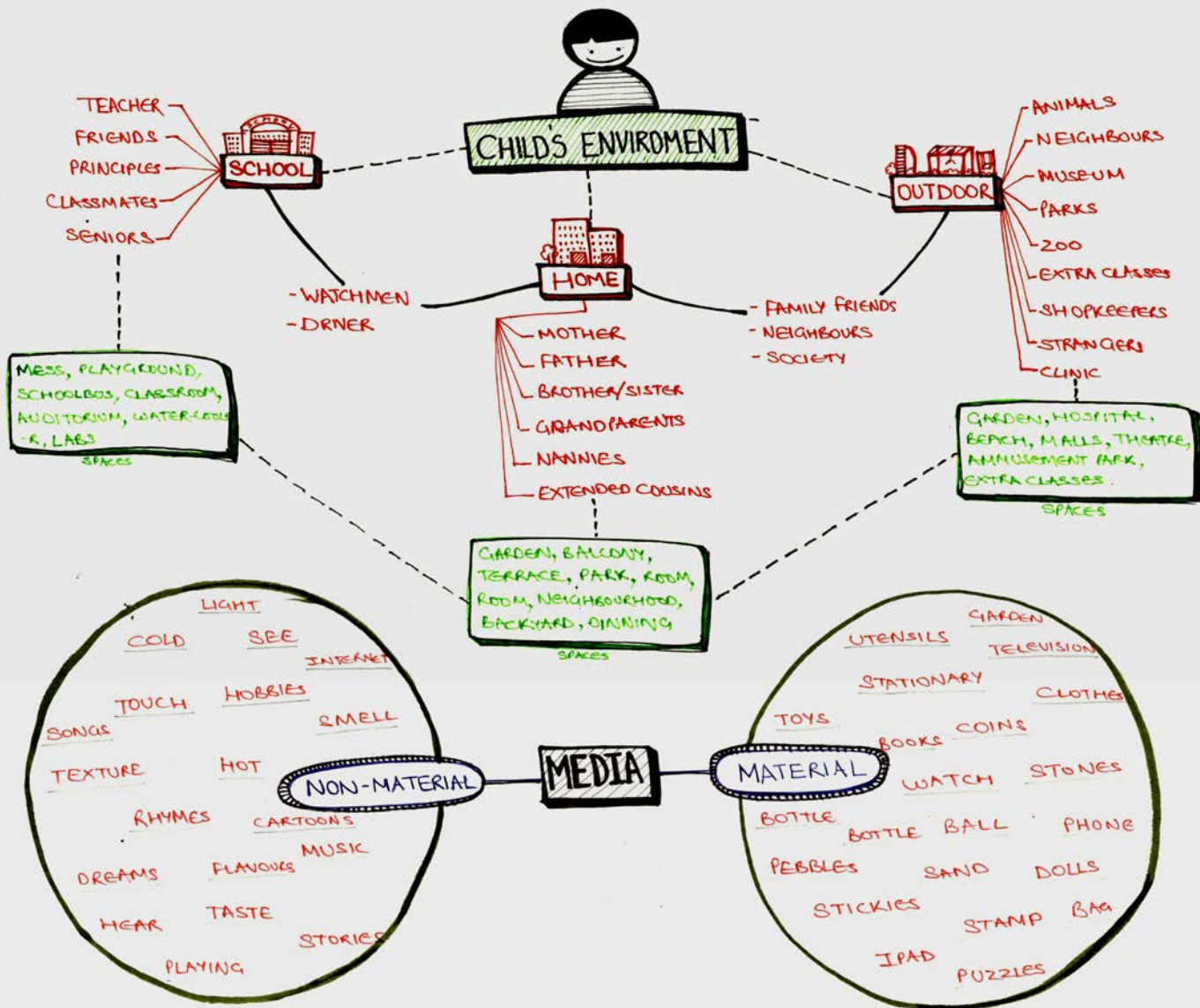
piaget stages of cognitive development

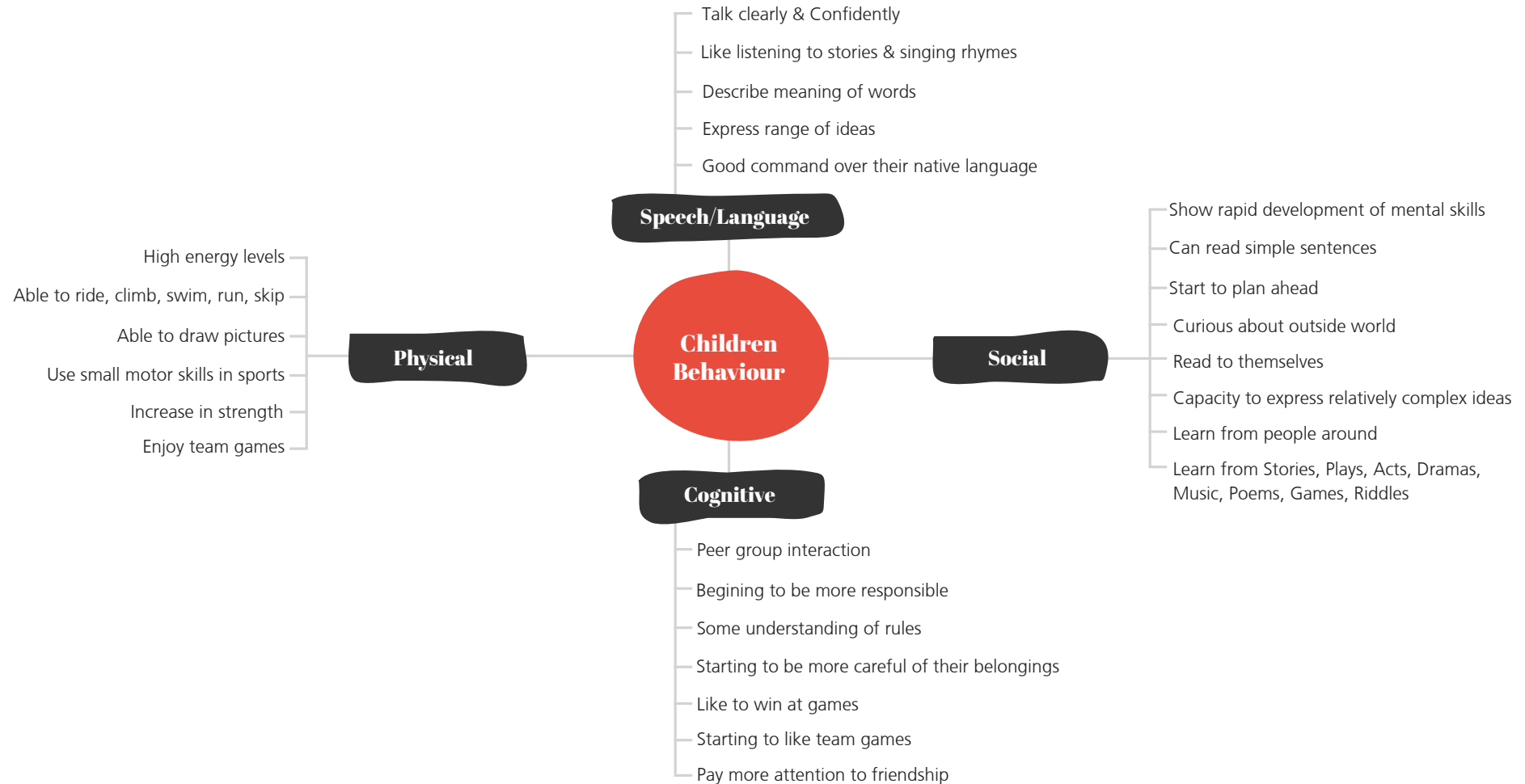


4-7 years old

Intuitive Phase

- Children at this stage tend to be so certain of their knowledge.
- Their thinking becomes more logical.
- They tend to become very curious and ask many questions.
- Concepts attached to concrete situation - Time, Space and Quantity are understood and can be applied.

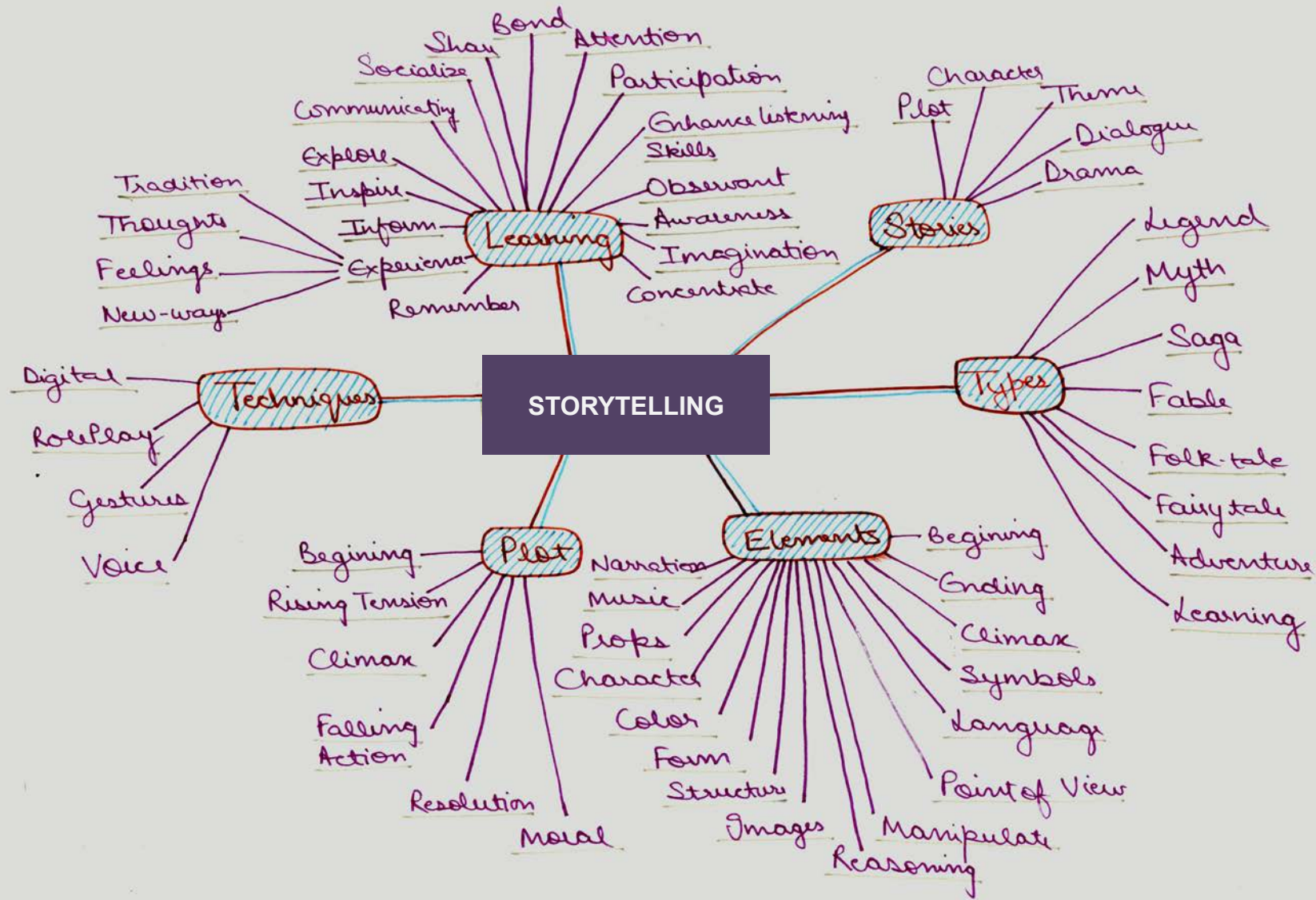


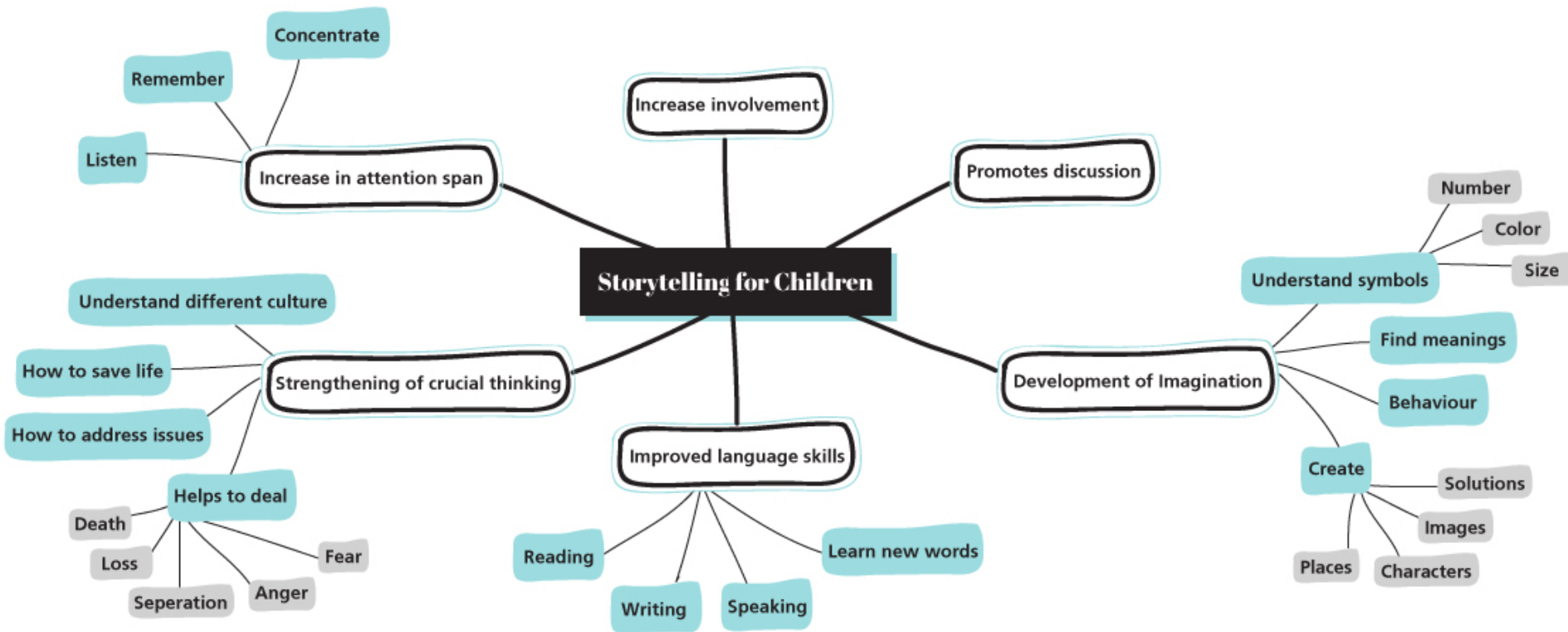


STORYTELLING

WHY Narrative?

- Encourages Active Imagination
- Activity of Learning
- Increased Knowledge
- Social Experience





Storytelling in Rajasthan



Kathputli (Puppets)



Phad Painting (Scroll)



Kaavad (Mobile Temple)

Kaavad

- The term kaavad comes from 'kivad' meaning door
- Numerous hinged panels that open outwards
- Multiple narratives
- To make a wish, or celebrate the birth of child or offer there gratitude for the fulfillment of the wish.



Kaavad

Timeless tales

- A single image may inspire an hour long narration
- Same image can have multiple stories
- Stories about challenges and hardships
- Marriages between humans and birds/ animals or humans/human and monsters

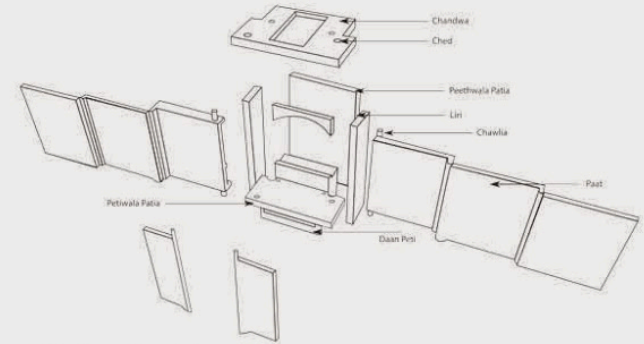


Kaavad

Structure and Order

- Usually one foot high and has 12 to 16 panels or pats that are hinged together.
- Each panel has a name and the images drawn on the panels have predefined locations.
- At the base is a donation box on which it states the donation will be used for feeding cows.

THE KAAVAD TRADITION OF RAJASTHAN



4: Kaavad parts as identified by the markers



5: Outer shrine with Vishnu/ Krishna and Kankasabai in hidden or gopast past

6: Inner shrine with Ram Sita Lakshman is reached through the open or khat past

Projects Inspired by Kaavad



Kaavad: Traveling Shrine: Home

Gulam Mohammed Sheikh



Home

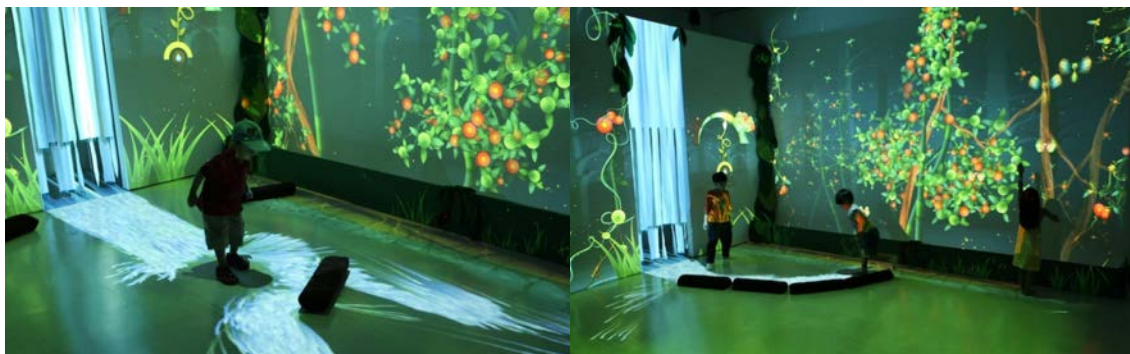
Nina Sabnani

CHILDREN + TECHNOLOGY



INTERACTIVE PUPPETRY

<http://design-io.com/projects/PuppetParadeCinekid/>



FUNKY FOREST

<http://design-io.com/projects/FunkyForestSAM/>



WEATHER WORLDS

<http://design-io.com/projects/WeatherWorlds/>



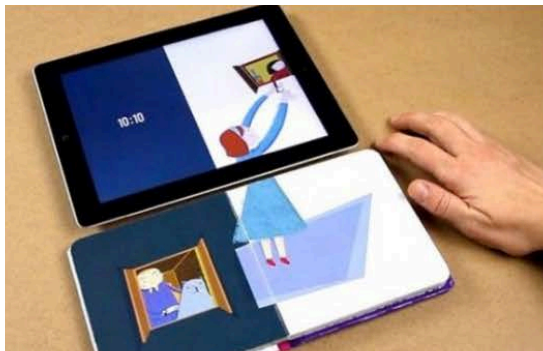
JABBER STAMP

<http://tangible.media.mit.edu/project/jabberstamp/>



TALKING MAPS

<http://www.amazon.com/Zanzoon-Interactive-Map-USA-English>



BINDING BOOKS

<http://www.bestinteractivebooks.com/2013/06/bridging-book/>



TIGGLY

<http://tiggly.com/>



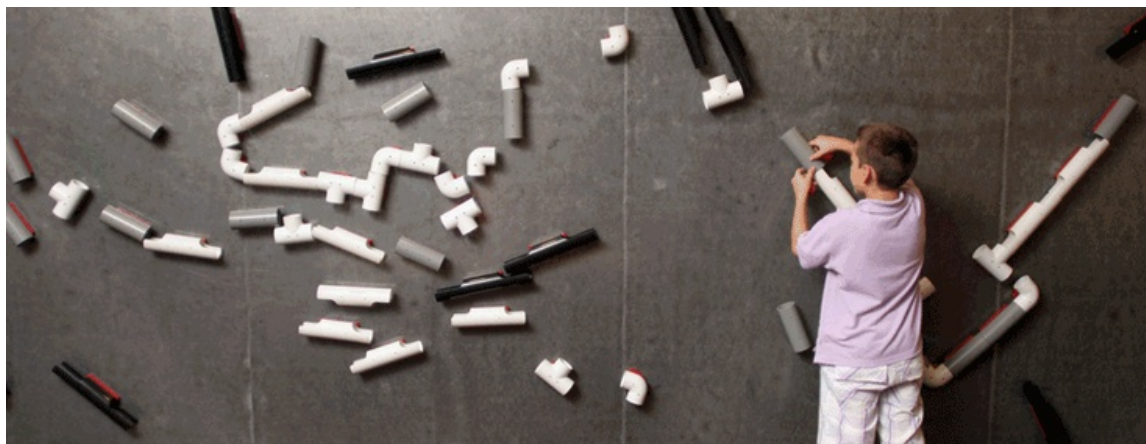
APPTIVITY

<http://mattelapptivity.com/>



INNO TAB

<http://www.vtechuk.com/innotab/>



IDEATION



CONCEPT 1

Kevad

Unfold the Stories

- The cover of tablet with narrative which can be explored and learned by unfolding each and every flap through auditory and visual inputs.
- Allows to interpret and explore new stories.
- The story goes through several variations as tablet will have different stories integrated in it.
- Interactivity with combination of sound, visuals and narrative on pressing the touch points,.

Ipad Cover



Storytelling with Kaavad





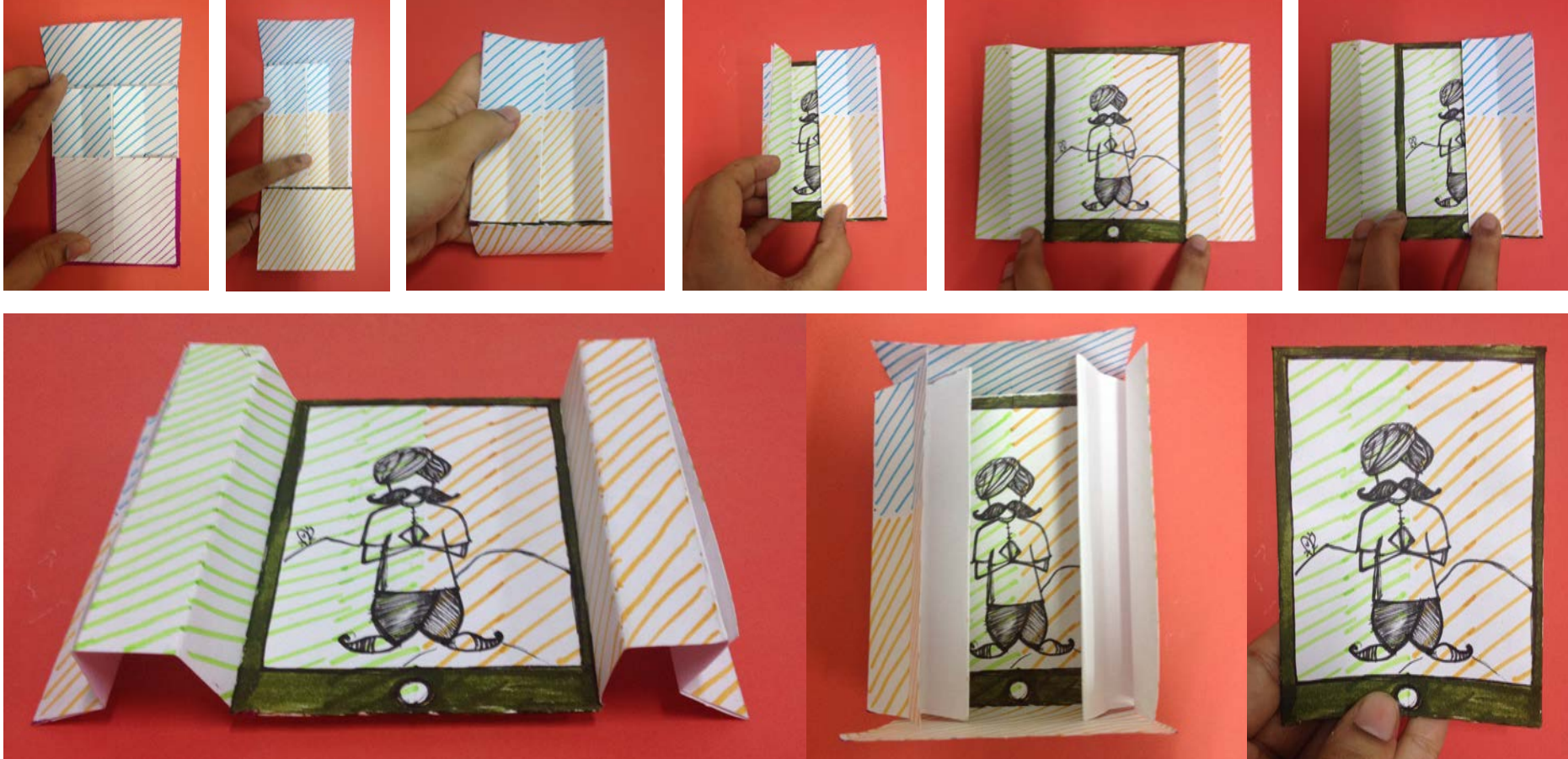
Evernote Peek

Learning app





AUDIO + VISUAL + NARRATIVE



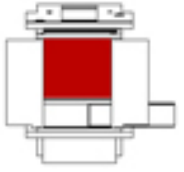


CONCEPT 2

Experiential Kaavad

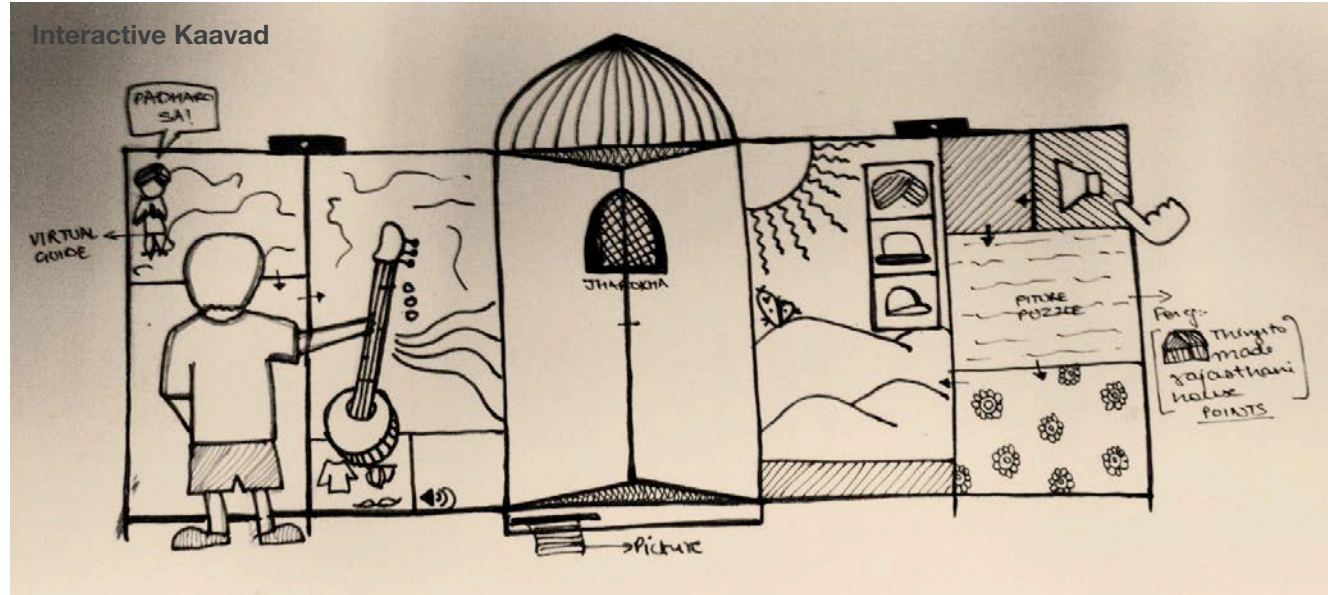
Interactive Installation (Museum/Airport/Malls)

- Kaavad installation of life size.
- Panels can be unfolded/unlocked step by step with set of tasks giving information about the Rajasthani culture.
- Activities like playing an instrument or looking through Jharokha to get the next fold unlocked or knowing some facts about Rajasthan can be a part of the interactivity
- Experiential Kaavad aims to give jist of Rajasthani culture with cultural artifacts incorporated with it to make it playful and fun.



CONCEPT 2

Interesting Facts(cow dung), Introduce concept of Rain water harvesting(well), Hospitality, Art & Craft





CONCEPT 3.1

Interactive Visual Narrative

Conductive Ink

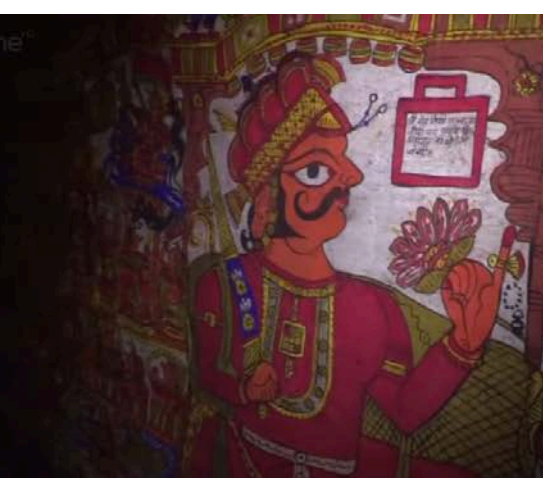
(Map/Story/Facts)



The visual narrative reacts to the touch of the child by giving audio feedback(narrative).

Accessible platform for children to get creative with technology in fun and intuitive way.

Story Book or Puzzle with 3-D pop-ups, audio and light feedback for bringing it to life.



CONCEPT 3.2

Interactive Poster/Board

Light Sensitive Ink

(Map/Story/Facts)



The content can be printed in light sensitive ink so that the visuals becomes visible only with heat(lamp/torch)

Color change is from colorless to colored when exposed to sunlight or heat





Children can explore stories with magical and enjoyable experience. Increases curiosity which results in better understanding.



Evaluation Matrix

Concept

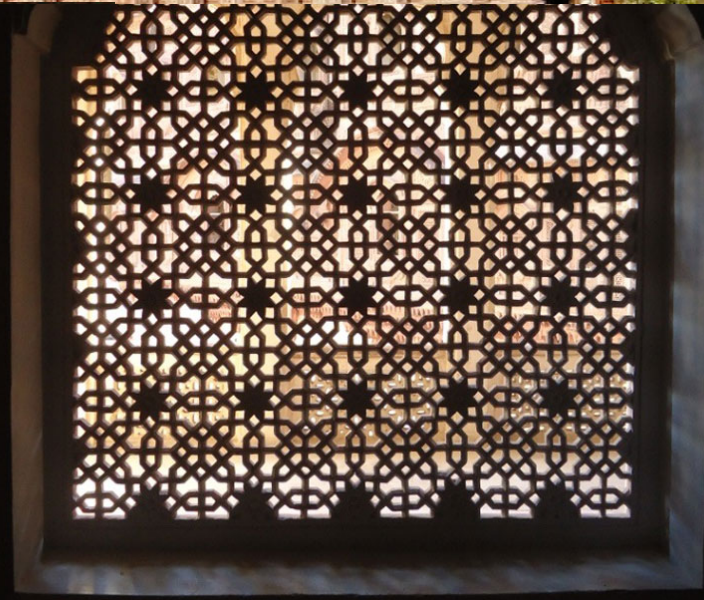
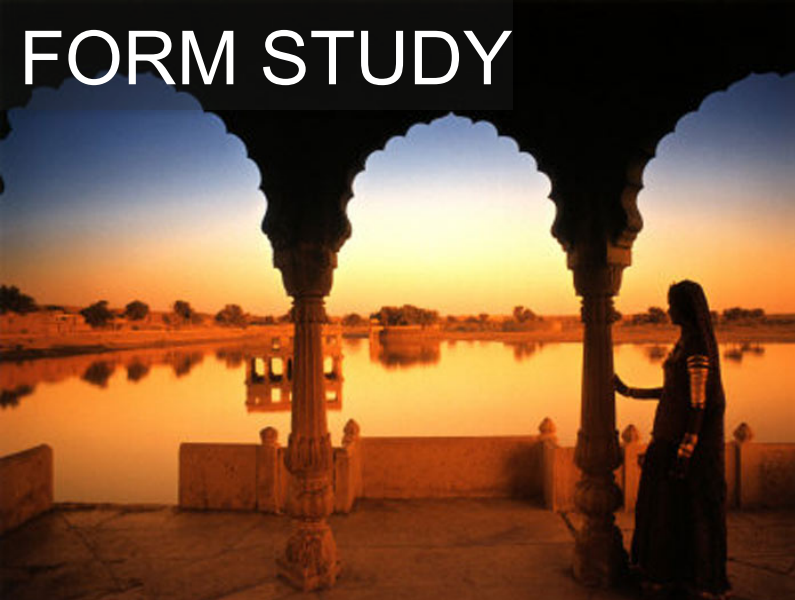
The concept was evaluated intuitively on basis of physical, emotional, cognitive and social engagement that the user will experience.

	Physical Engagement	Cognitive Engagement	Emotional Engagement	Social Engagement
 Concept 1 Kevad Unfold the stories <i>Audio + Visual + Narrative</i>	LOW	HIGH	MEDIUM	LOW
 Concept 2 Experiential Kaavad Interactive Installation <i>Interactive + Activity + Artefacts</i>	HIGH	HIGH	HIGH	HIGH
 Concept 3 Interactive Visual Narrative Interactive Poster/Painting <i>Map + Story + Facts</i>	HIGH	MEDIUM	MEDIUM	HIGH
 Concept 4 Interactive Board Interactive dark room storytelling <i>Map + Story + Facts</i>	HIGH	HIGH	MEDIUM	LOW

Final Concept Deliverables

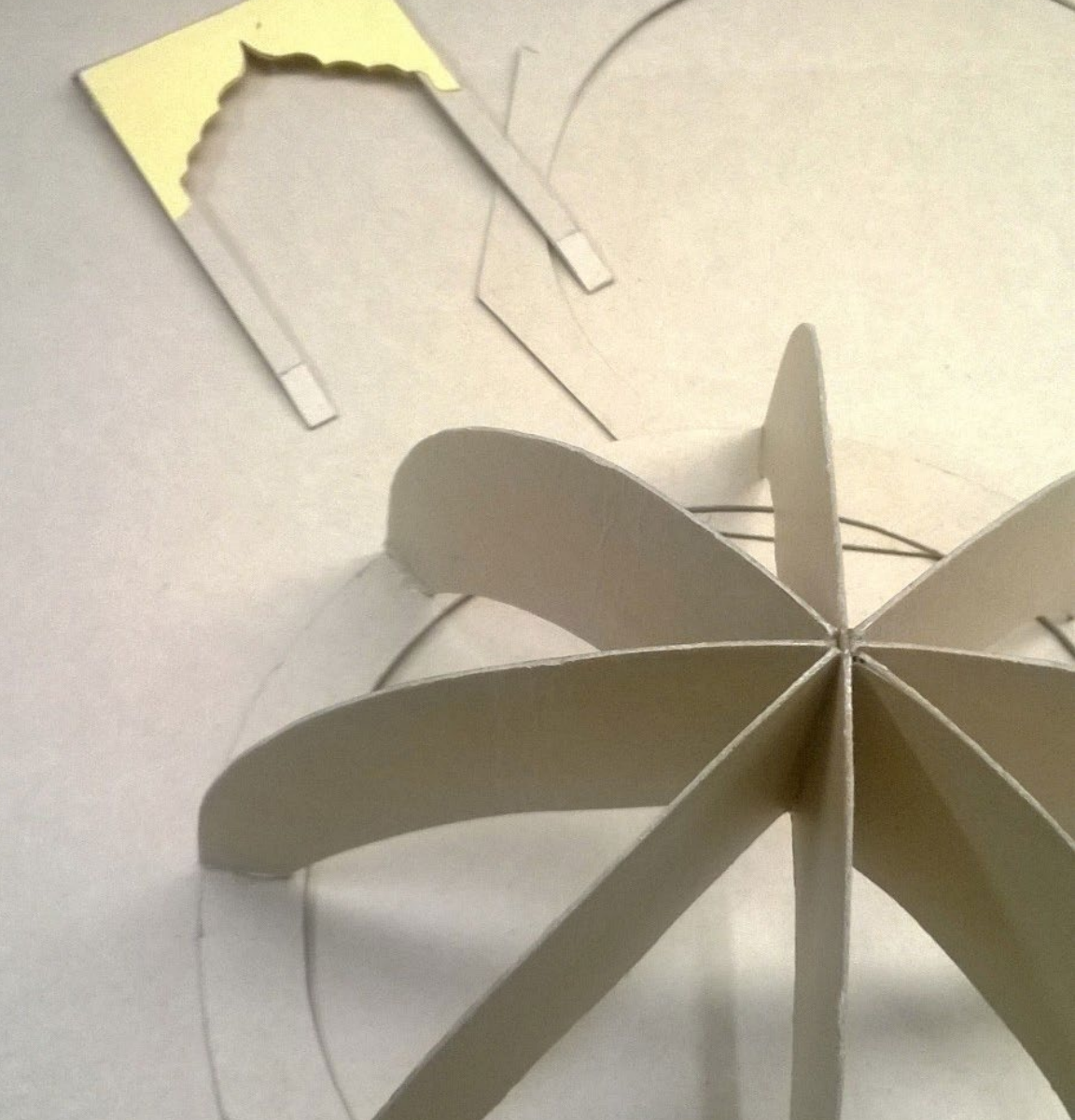
Research till now	Deliverables for Installation
Kaavad Structure Architecture	Structure
Colour Texture Art Craft Traditional painting	Visual Language
Kaavad History Tales Story of folk songs Cultural habits Daily Chores Humour Poem Food	Story
Activities	Activity Flow
Sequence	Interaction

FORM STUDY



VISUAL LANGUAGE

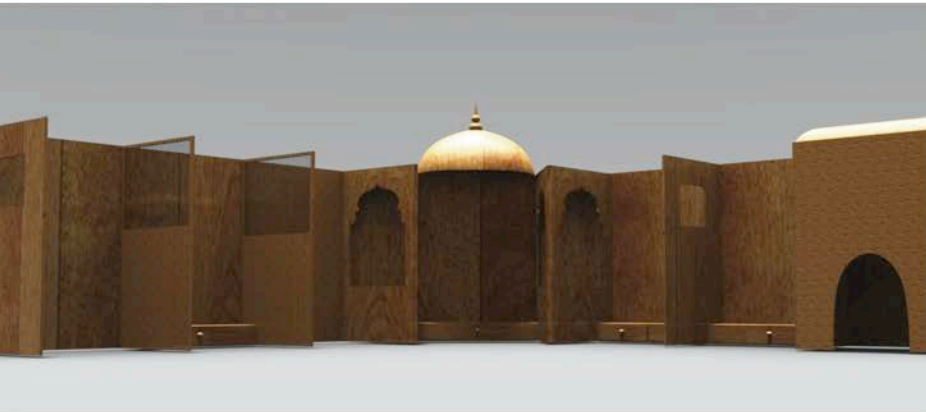
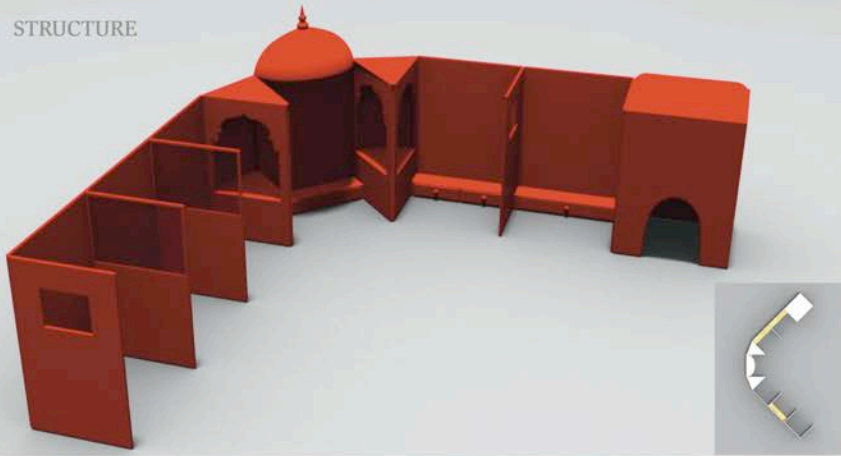




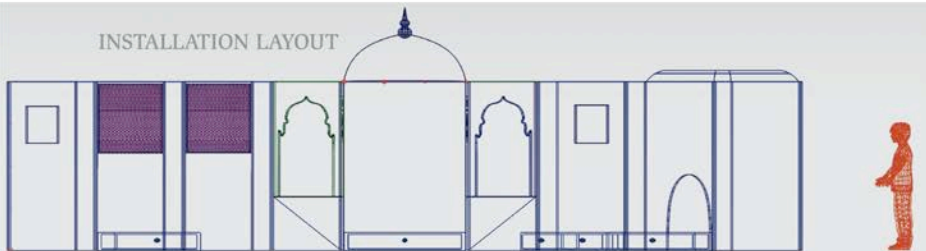
STRUCTURE

Explorations

STRUCTURE



INSTALLATION LAYOUT



Concept 1

#kaavad

#jharokha

#jump

#peek

#hide

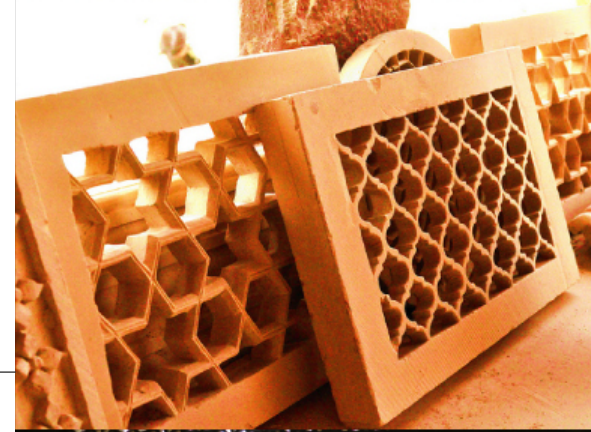
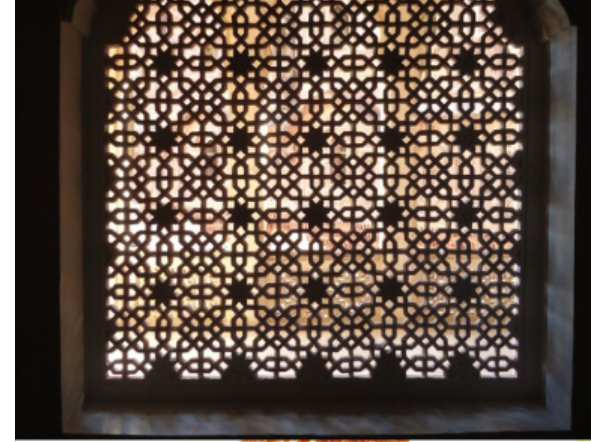
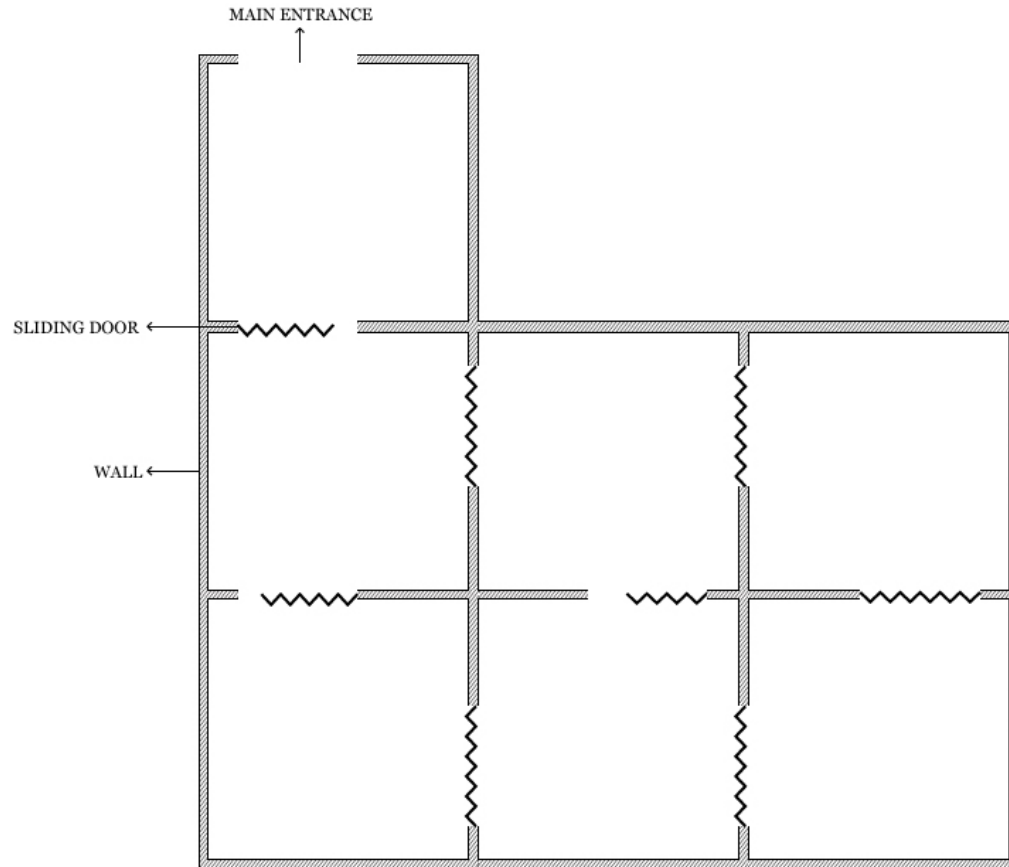
#playful

#interactive

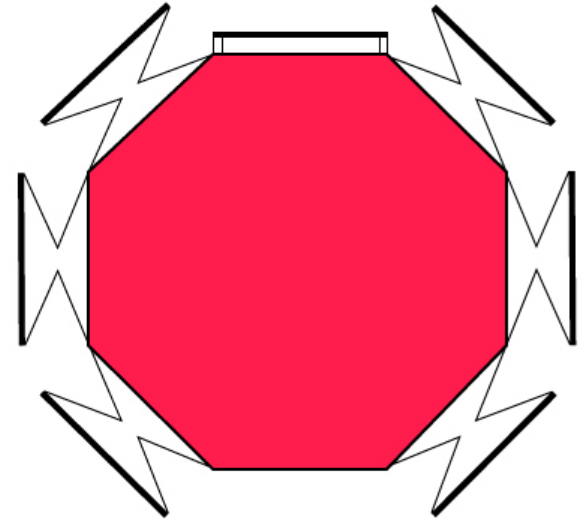
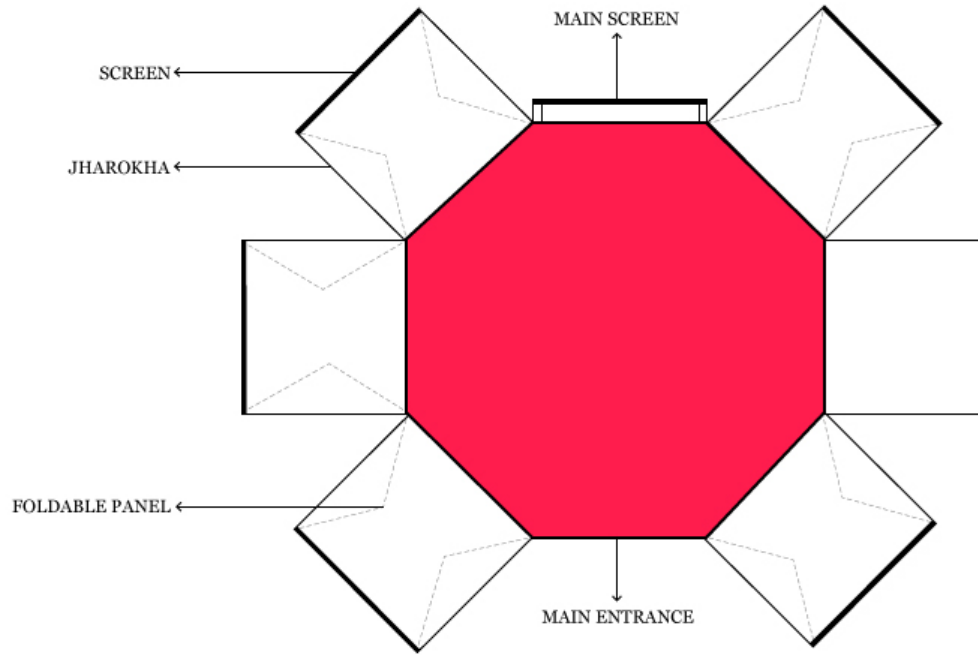
PROBLEM: Not Flexible. Structure is rigid and it can't be moved unlike the doors 'pats' in kaavad

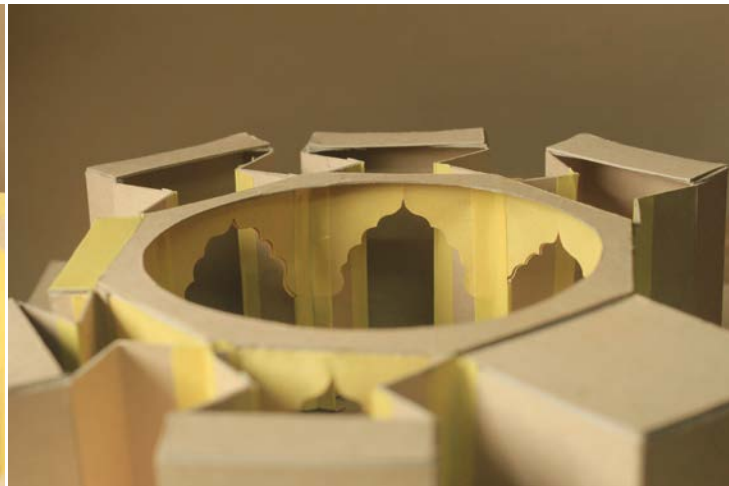
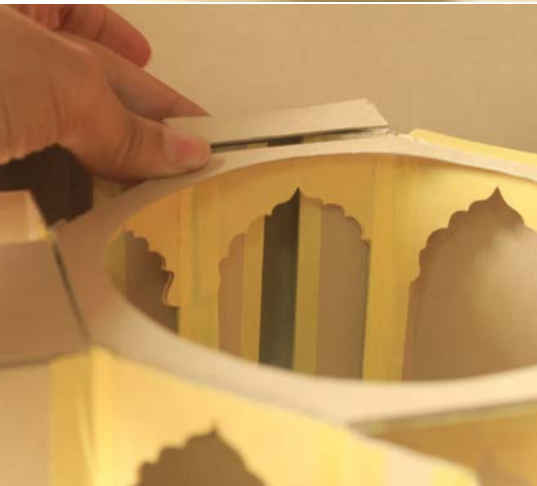
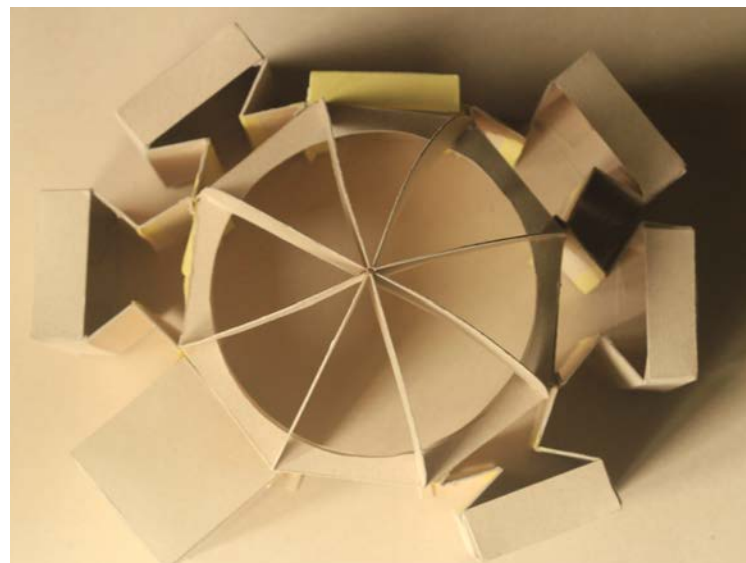


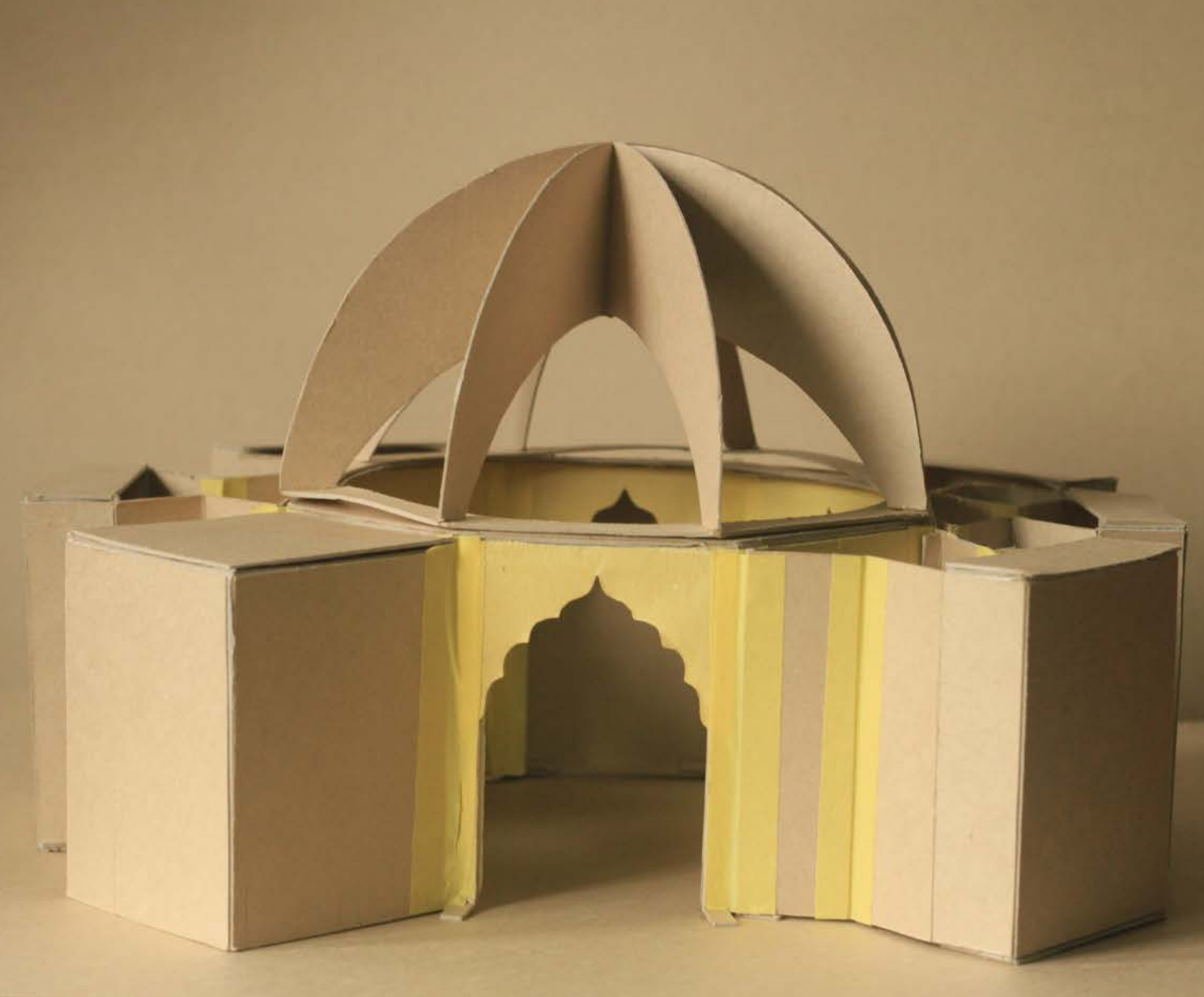
Concept 2



Concept 3







Final Concept

#kaavad

#jharokha

#chattris

#peek

#hide

#bend

#playful

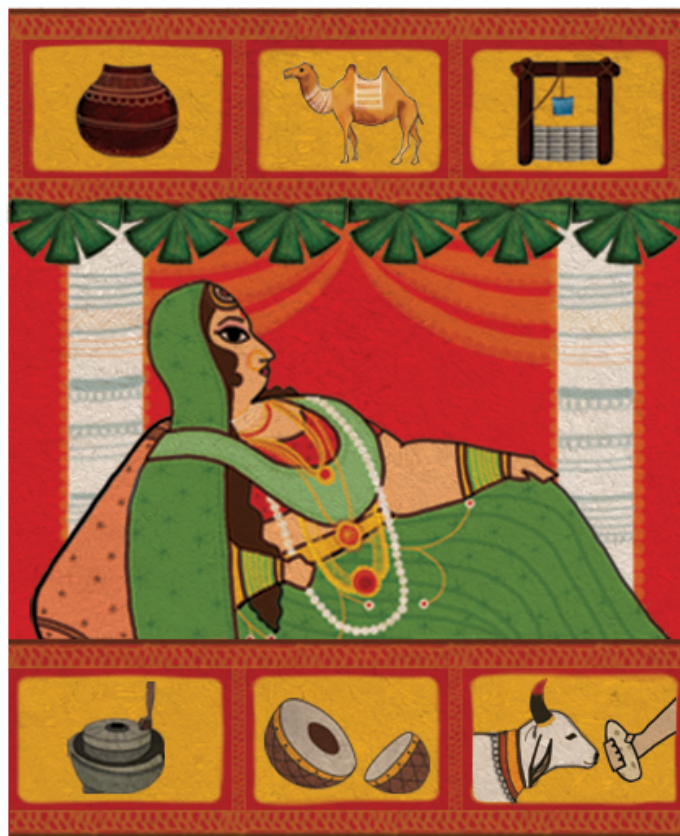
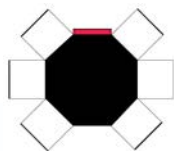
#interactive

#curiosity

#fun

#discover







Baajra ri Roti

FACTS

- Introducing Bajra as it is the staple food.
- It provides ample amount of energy to fight the extreme temperature.
- In household, they grind fresh flour every day instead of storing.

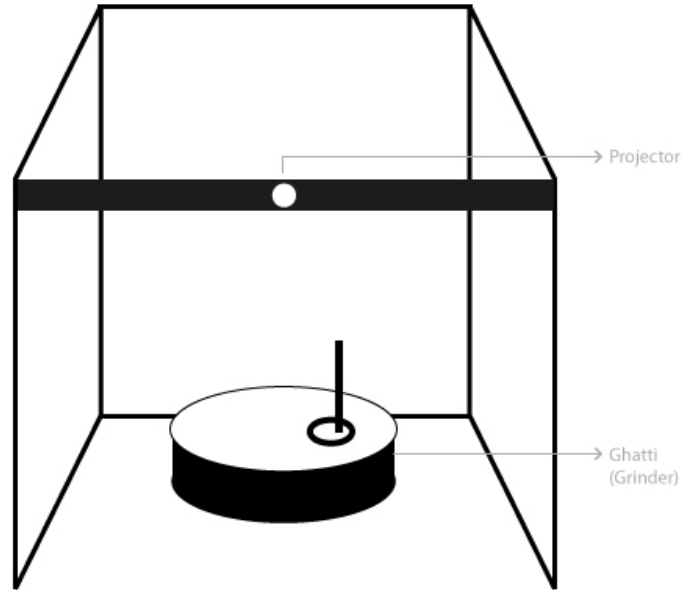


ACTIVITY

- The child is introduced to bajra and the traditional grinder.
- The child is asked to grind fresh flour to make bajra roti.
- He/she needs to rotate the handle of traditional grinder which leads to preparation of the bajra roti.
- For making more number roti's, the child has to put in more grain in the center of the grinder.

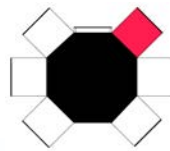


TAKEAWAY: Introducing Bajra, Eat fresh, Introducing traditional grinder



Tech

- A mini projector facing kaavd pat (the front wall)
- Ghatti, when rotated will activate animation. The rotation will be detected through 360 degree potentiometer/ piezo/rotary sensor.
- As the rotations will be detected number of roti's will appear on screen.





Music

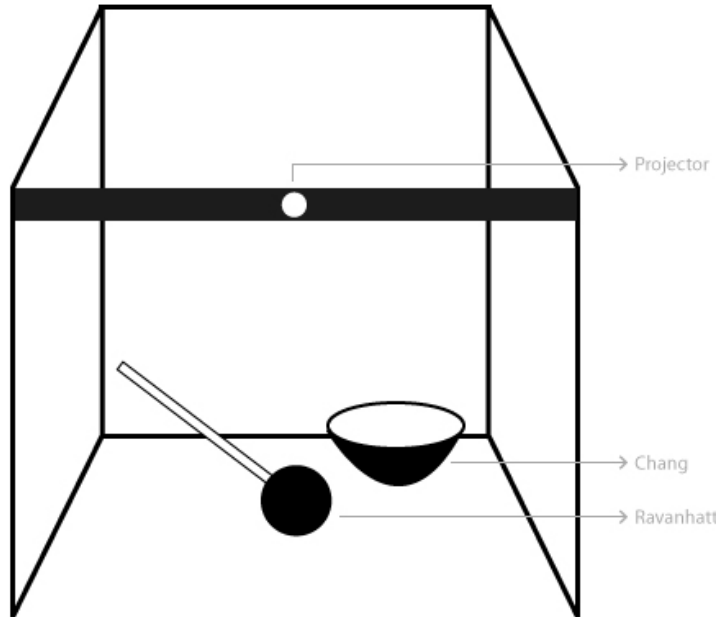
FACTS

- Rajasthan has highly cultivated classical vocal and instrumental music.
- Rajasthani musical instruments which may not be found anywhere else can be classified into Percussion, Wind, Auto phonic and String.
- The materials used to make these are picked up from day to day life.

ACTIVITY

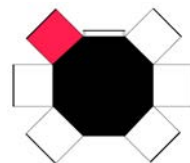
- The child is introduced to Rajasthani instruments.
- The child can play the instrument kept in front.
- As the child starts playing the instrument, the puppets (kathputlis) will start dancing on their beat on the screen.
- The faster they play the faster they dance with some additional music added.

TAKEAWAY: Name and sound of traditional instruments, everyday objects used to play music for entertainment.



Tech

- A mic is placed in the space.
- A mini projector facing kaavd pat (the front wall)
- As the sensor picks up the instrument sounds, it shows the puppets dancing on the screen.
- Speed of the music is direct proportionate to the speed of dance of puppets.
- There would be automated music playing in the background and will activated when the first instrument sound is heard.





Paniharin

FACTS

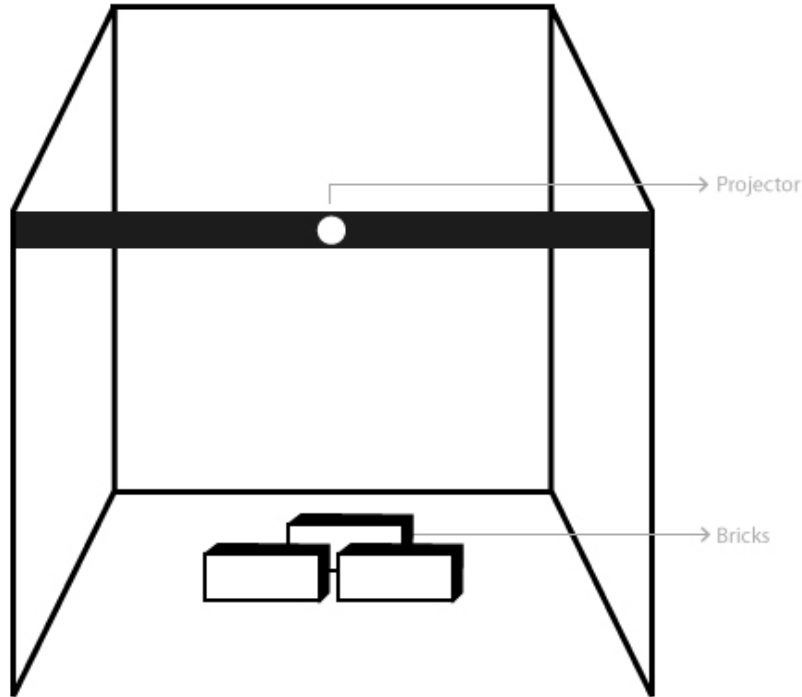
- In the scarcity of water on land (sour water), there are provisions in every house to store sweet rain water.
- To survive the year, they collect water through rain water harvesting in kund(water storage rooms) or in common stepwells.
- There are numerous festivals, songs, religious activities based around the water harvesting.

ACTIVITY

- The child is given pieces of pipe, which he has to attach (magnetic) on the screen to direct the flow of rain into the Kund(open well).

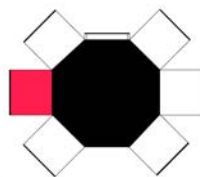


TAKEAWAY: Importance of rain water, rain water is sweet and remains fresh, importance of water in scarce land.



Tech

- A mini projector facing kaavd patt. (the front wall)
- There is an animation playing on the screen of rain falling.
- The child has to pick up the bricks and place it on the screen to direct the water flow towards the open well.
- The placement of bricks can be detected by the camera through color detection (image processing)





Water Utensils

FACTS

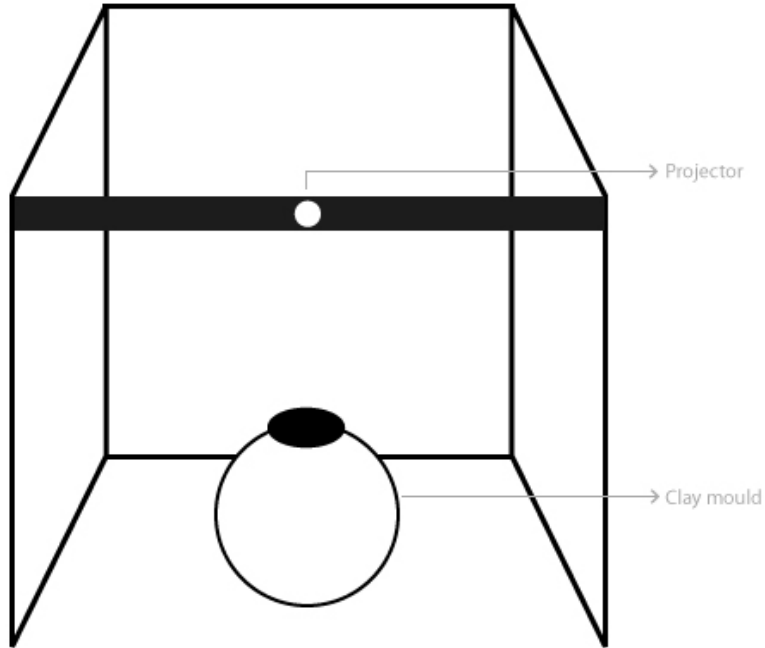
- For water storage different type of utensils are used made of clay, copper and other alloy. Ghada, Matki, Chari .etc
- The mud utensils keep the water cold in hot weather.
- The copper utensil is used to keep water overnight so that it ionizes as it has electromagnetic energy and is used to drink in the morning.

ACTIVITY

- The child has to make one of the utensil using clay and mould.

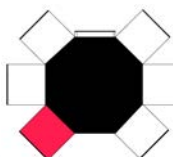


TAKEAWAY: Clay utensils keep water cold.



Tech

- A PIR sensor is placed for knowing when a child enters.
- The utensils and it's usage is introduced to the child.
- He/she is asked to place the clay in mould and make utensils.
- And asked to take it with them when he is finished with exploring all the panels.





Unth

FACTS

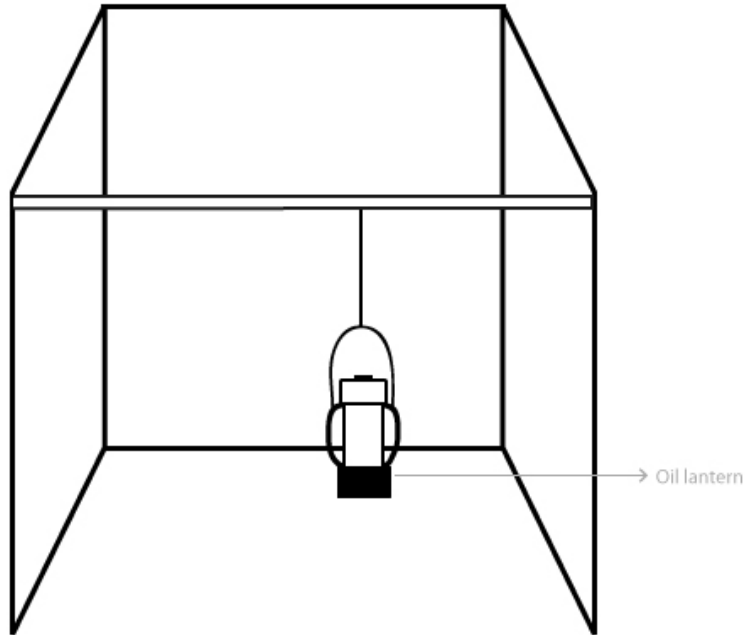
- Camel is the desert survivor. It was the only reliable mode of transport in rippling windswept Thar desert. They can sustain themselves with limited water and food.
- Natives used to keep camels as pets as well as cattle.
- Camels are intelligent very quiet and human friendly animals.

ACTIVITY

- The child has to carry lantern inside the dark room and spot camel amongst many other animals and pat hand on the spotted camel.
- In the process, they will hear different sounds of different animals.

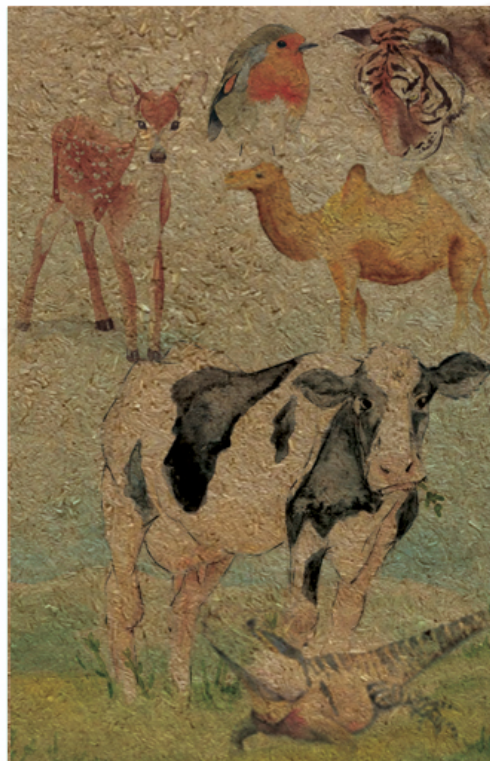
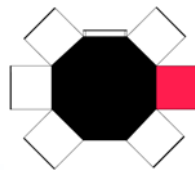


TAKEAWAY: Introducing camel as a pet and friendly animal, understanding camel sound



Tech

- Electric lantern is used to locate the animal in the darkness.
- The dark room is painted with animals, by touching them they will make sounds.
- The paintings are painted from photochromic ink which brightens when comes closer to light.
- There are piezo sensors attached behind every animal drawing so as to activate sound.





‘Jeemo Sa’

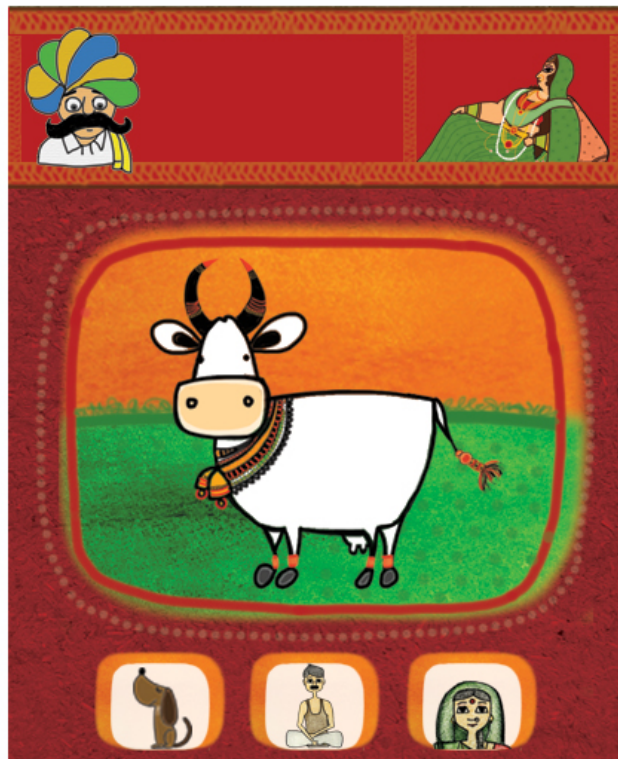
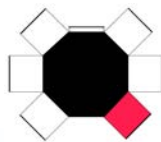
FACTS

- Traditionally in every household while preparing food, the first roti is prepared for the cow, second for the brahmin (scholar in solitude), third for the helpers (untouchables), fourth for dogs and then the family. This is based on philosophy of providing for the surrounding and welfare of everyone.

ACTIVITY

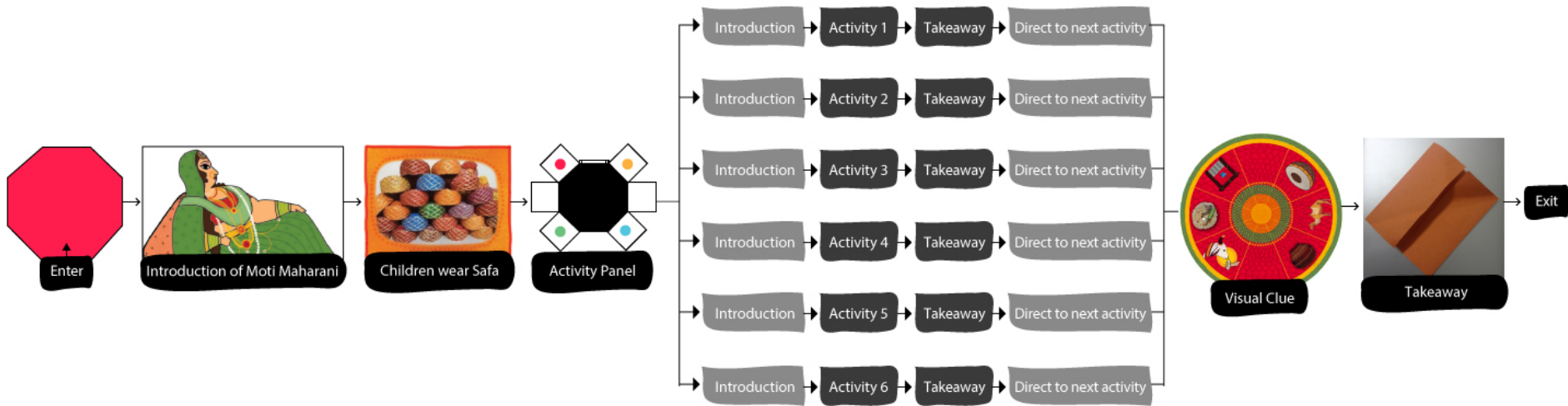
- The child has to provide food (roti) in chronological order as assisted by the mascot.
- They have to place the magnetic roti on the animal and human pictures before giving it to the Rani.

TAKEAWAY: Respect food, provide to others, think about the helpless and animals as well, learn to give and share from how much ever one has.



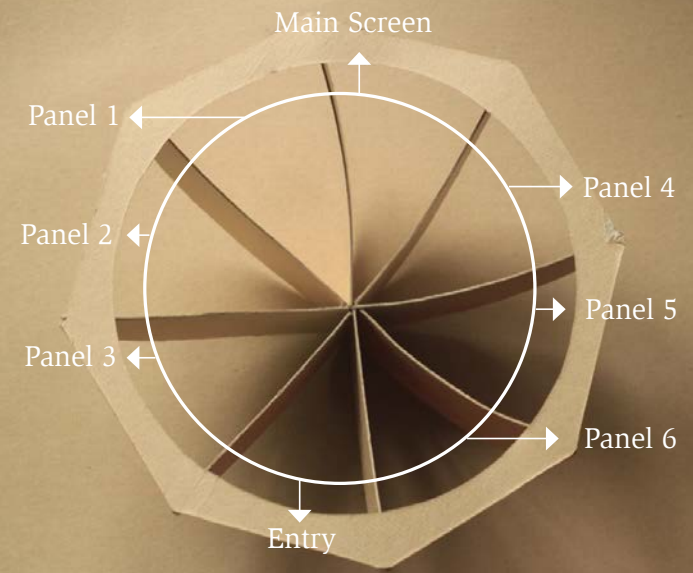
Scenario

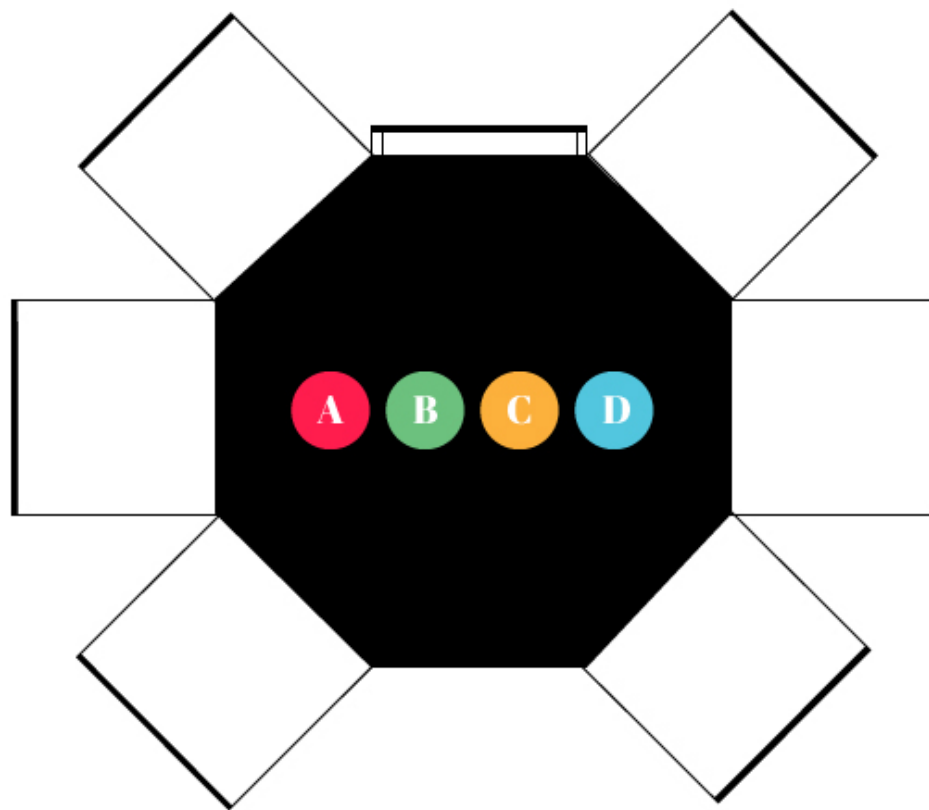
Activity Plan

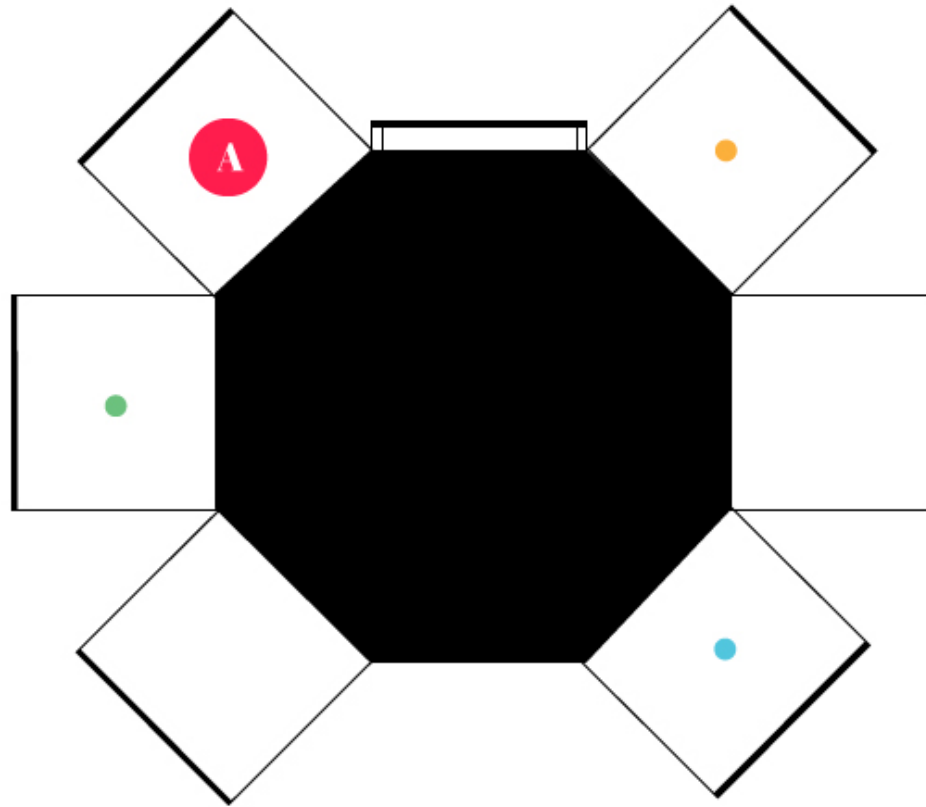


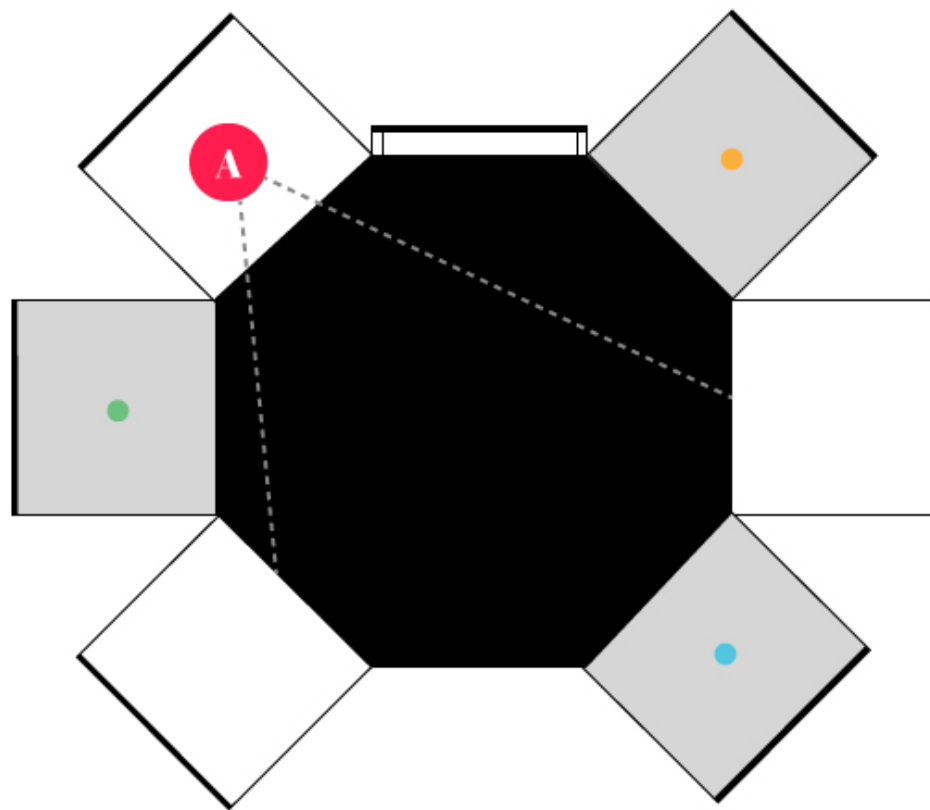
Ceiling of dome (Vault)

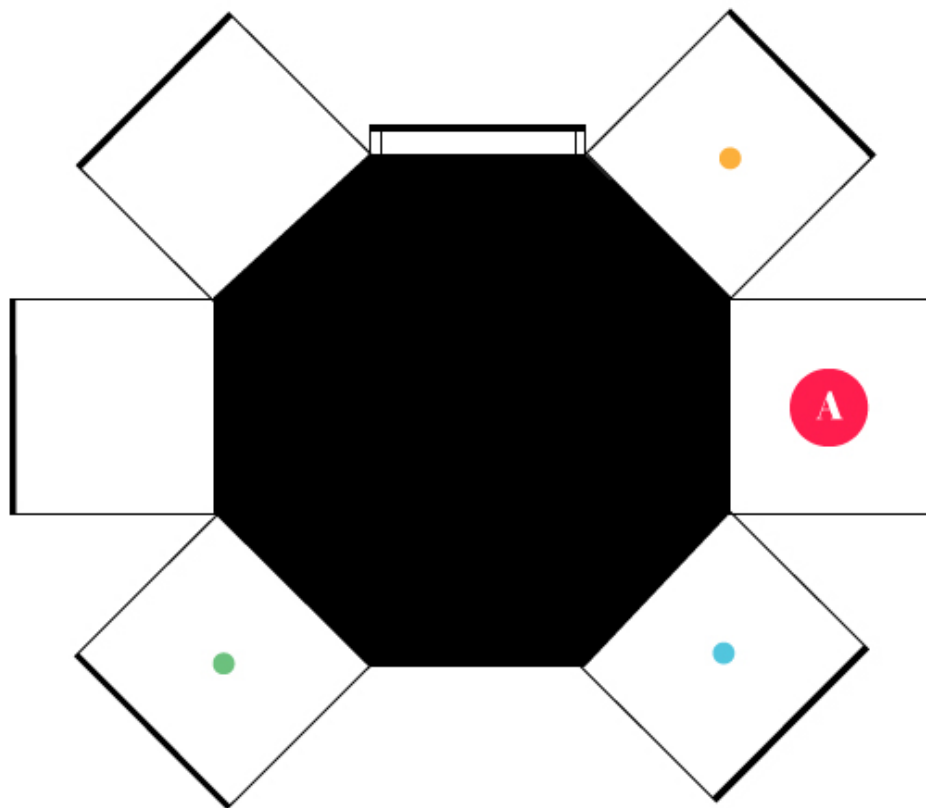
Visual clue

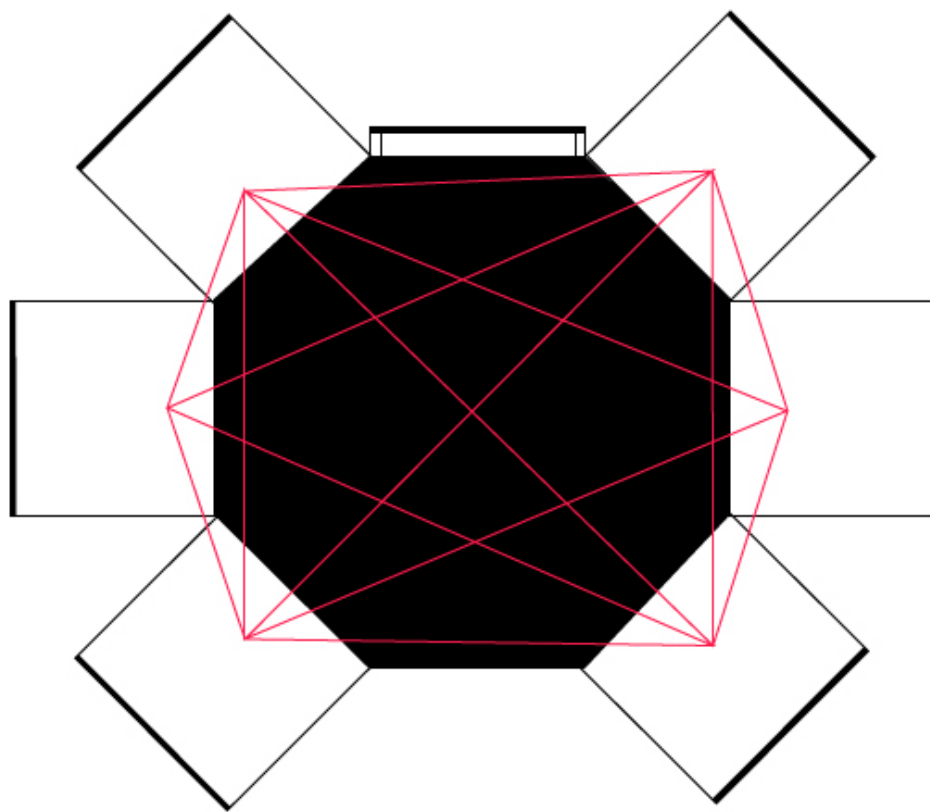












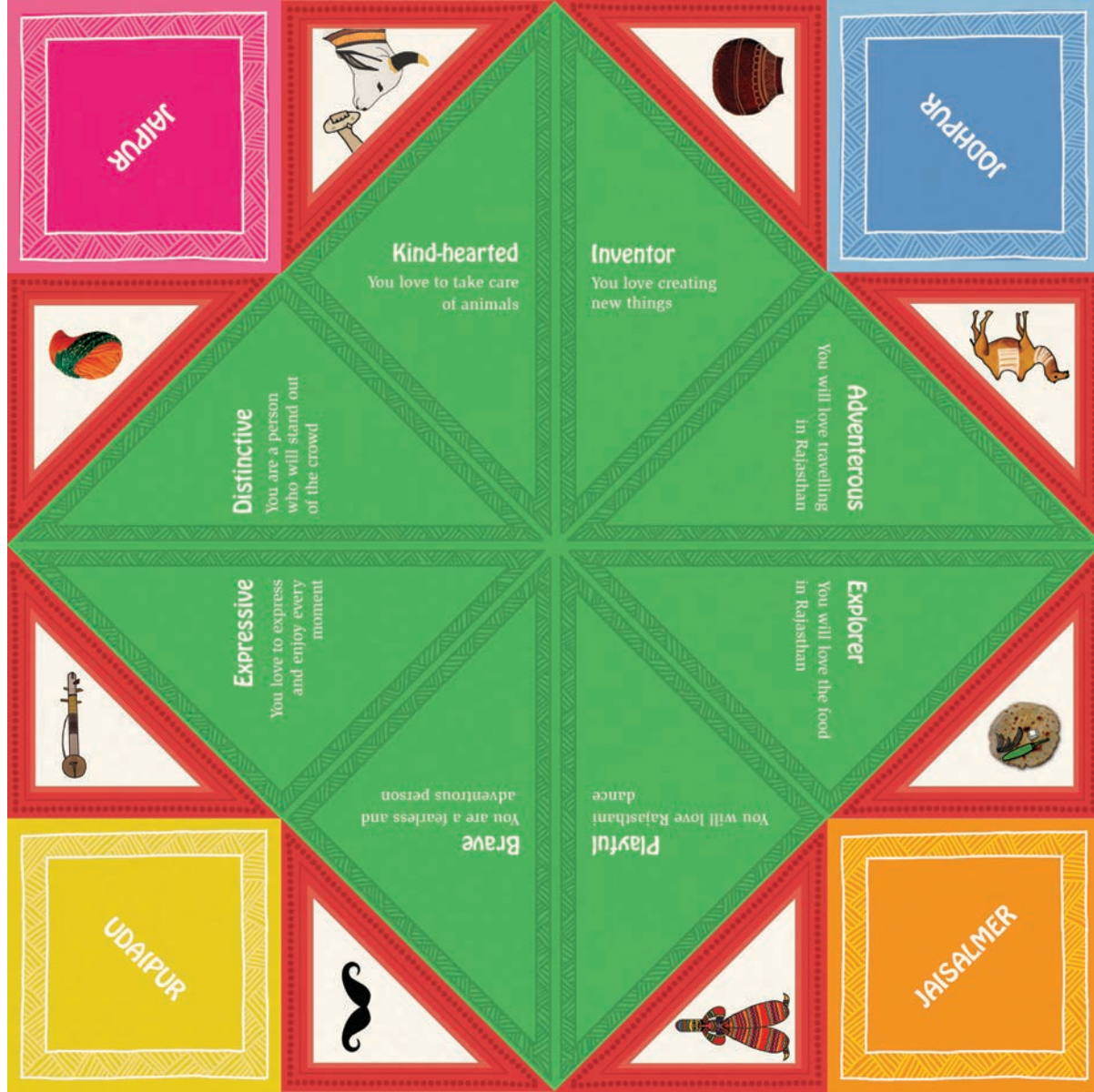
Final Output





Takeaway





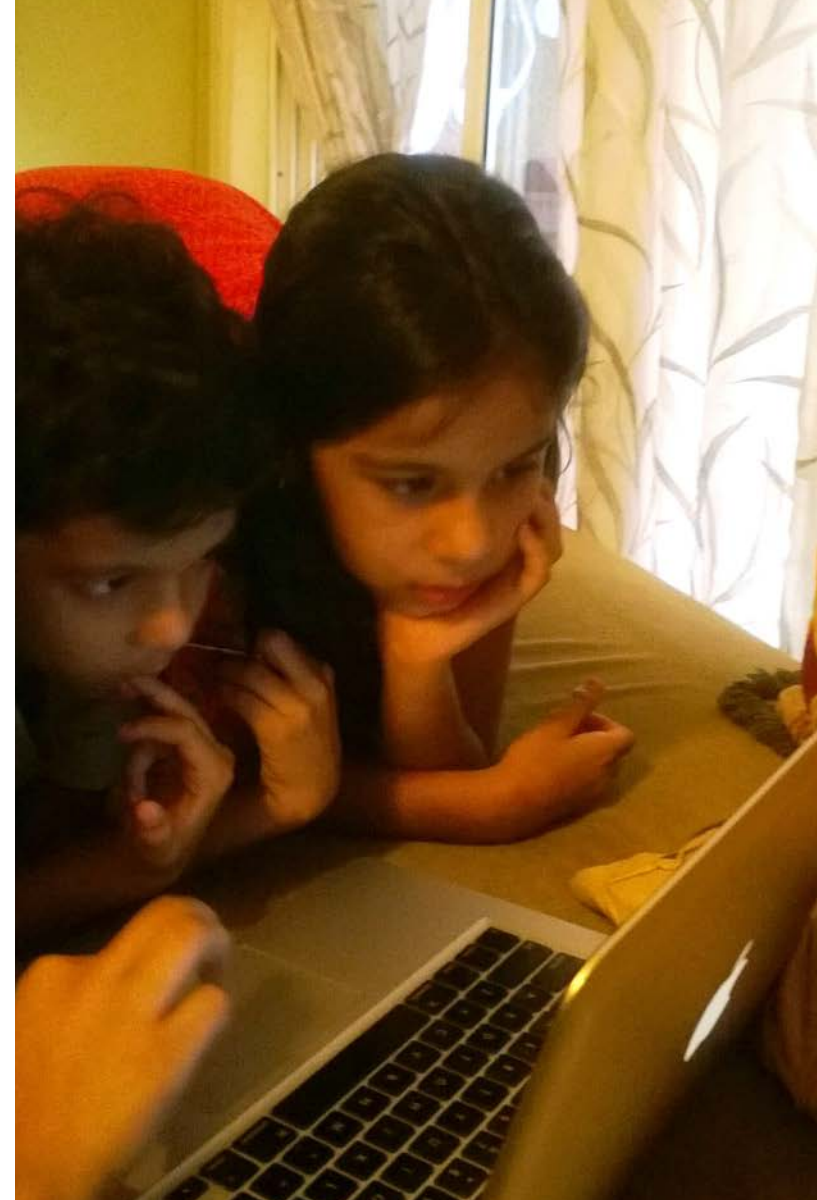
Evaluation

Target Users

- 5 years old- 1 user
- 7 years old- 2 users

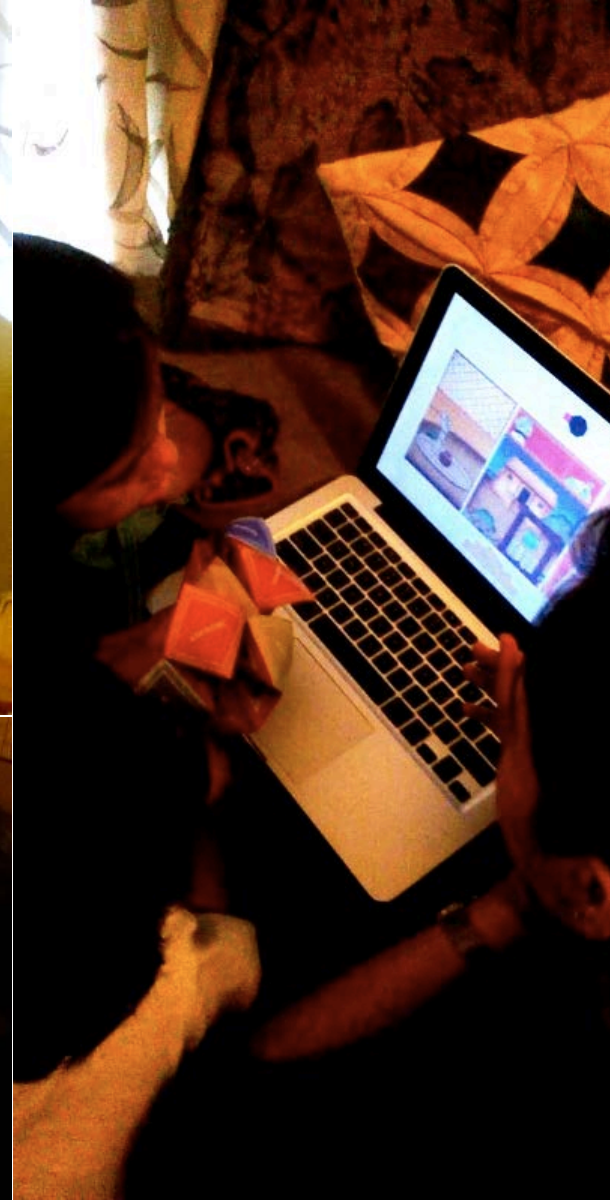
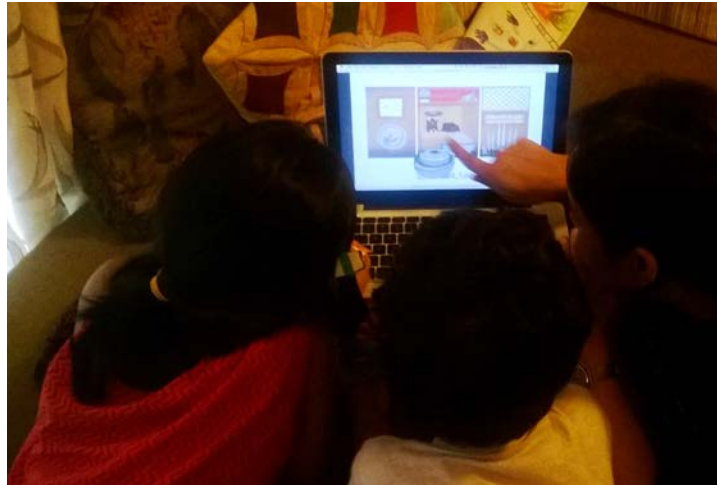
About the Users

- Migrated from Rajasthan.
- Born and brought up in Mumbai.
- Parent's don't practice Rajasthani culture at home.
- Unaware of their native roots (music, dance, food, cities, climate, rituals, festivals)



Activity

- Narrated the story of Moti Maharani with reference to the visuals and videos.
- After the narration, conducted a small question answer game.



Feedback

Story

Engaging story

"Tell me the story of Moti Maharani again"

"Where do they get water when it's over"

Interesting Activities and wanted to perform task

"We also give food to our birds when we eat" (relating to the cultural context)

"I know how to play Dholak, so If I play the puppets.."

"Show the puppet dance again"

"So if I move the chakki it will make roti's?"

Got curious and asked questions and engaged in a conversation with their mother

"I have eaten Bajra Ka roti once in Chokhi dhani and I like it"



Feedback

Takeaway

The game triggered kids to find out more about the Rajasthan.

"What is this city called"

"Why is it blue in color"

They played again and again with everyone in the house with the takeaway, even though they could not read everything.

They put there own names to the symbols illustrated.

"The topi, sorry! I choose the pagadi"

Did not know how to spell the symbols.



Thank you